MAR 10 1949
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MARCH, 1949

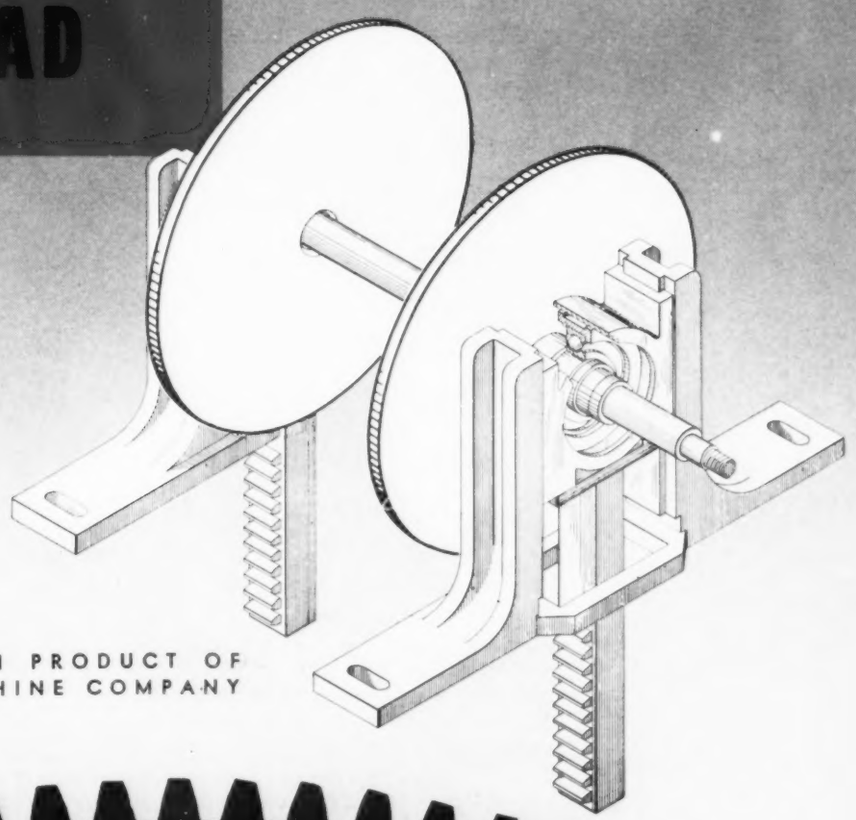
Textile Industries

formerly
COTTON
Textile Industries

CONTENTS, PAGE 3 ADV. INDEX, PAGES 233, 235 and 237

GIVES FIRMER LAPS!
SAVES MAINTENANCE!
CUTS EXPENSE!

PRECISION RIBBON and SLIVER LAP BALL BEARING LOGGERHEAD



MODERNIZE your ribbon lap and sliver lap machines with Precision's new ball bearing loggerhead assembly. Installation of these units means substantial savings in maintenance . . . and assures *firmer laps*. Made of meehanite, cast iron and steel, these assemblies bear pre-lubricated ball bearings. These are the only such units in which the slide block and rack are in two separate, easily replaced pieces. They are less expensive, trouble-free and wear is negligible. Investigate without delay!

ANOTHER MODERNIZATION PRODUCT OF PRECISION GEAR & MACHINE COMPANY

FOR DETAILS AND QUOTATIONS . . . WRITE, WIRE OR TELEPHONE:

PRECISION GEAR & MACHINE COMPANY
INCORPORATED
DIVISION OF TURNER MANUFACTURING COMPANY
2001 NORTH TRYON STREET
CHARLOTTE, NORTH CAROLINA
The South's Largest Manufacturer of Gears and Chain Drives

Commercial

FACTORING

More and more, the word "COMMERCIAL" is recognized as the "distinguishing mark" in factoring. It is the symbol of long experience, complete facilities and resources, and a knowledge of every branch of the textile industry.

We will gladly explain in detail what *COMMERCIAL FACTORING* can mean to your business in new opportunities and increased profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Victor & Achelis, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK 16

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON 10, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

CFC

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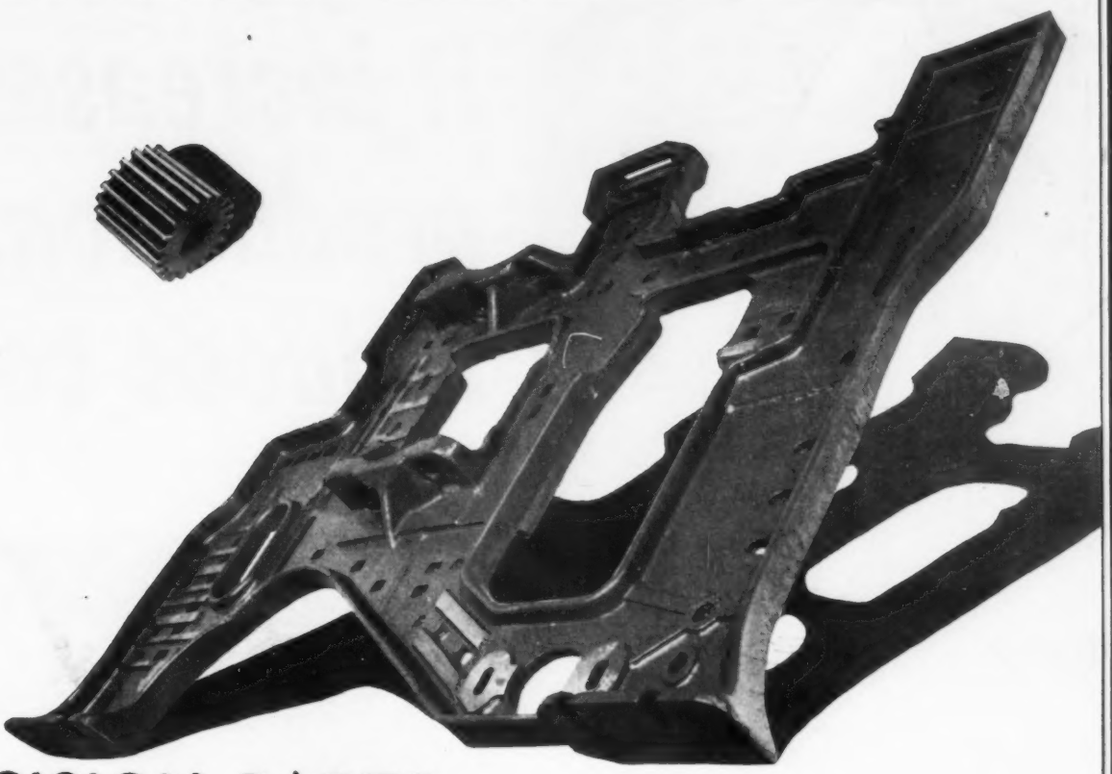


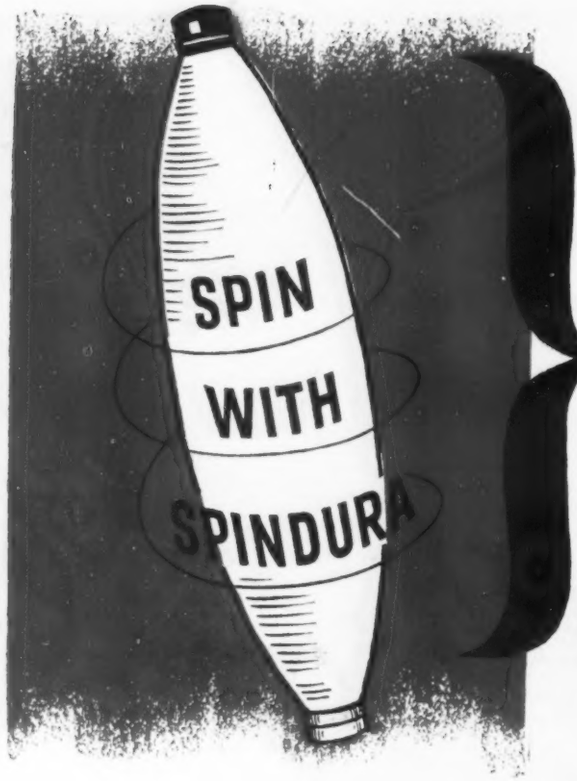
PRECISION PARTS *Equal* PROVEN PERFORMANCE

THE MODERN high-speed DRAPER loom is a complex machine—a machine that demands precision parts in its manufacture. From motor pinions to loomsides, each part is machined in specially designed jigs and fixtures by skilled workmen operating the latest machine tools. Precision parts must result, there can be no variation.

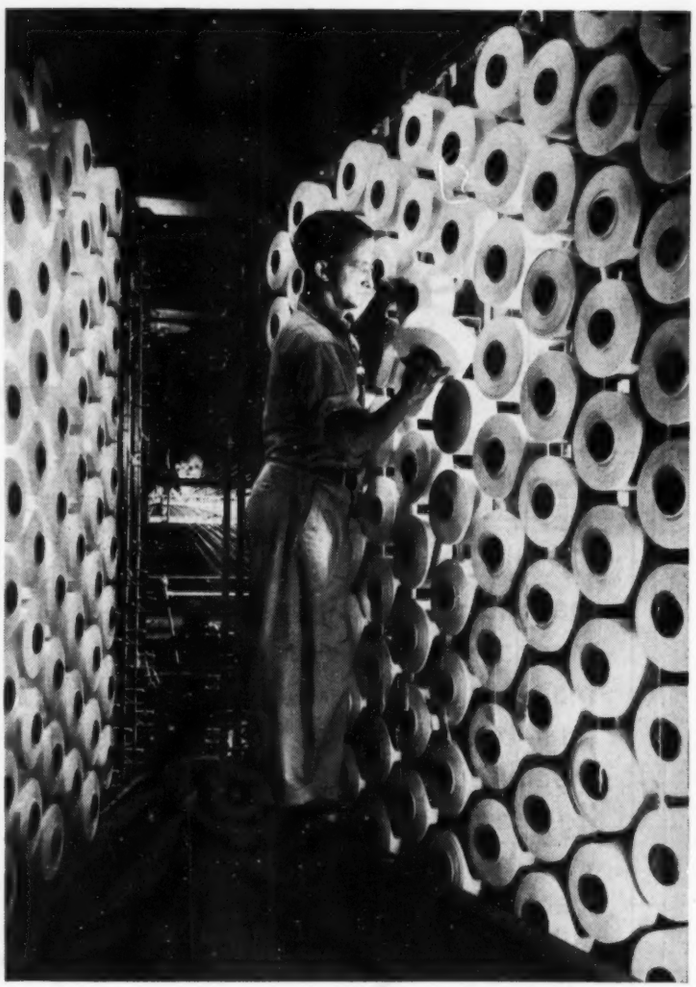
- Standardized shop procedure means Precision Parts.
- When you buy DRAPER precision parts, you buy proven performance.
- The proven performance of DRAPER looms means more cloth at less cost.

DRAPER CORPORATION

Atlanta, Ga. Hopedale, Massachusetts Spartanburg, S.C.



it increases production, reduces costs



FAST-SPINNING spindles require a very special lubricant, one with exceptional resistance to oxidation, thickening and fogging. Use *Texaco Spindura Oil.* You'll find your yarns coming through smoother, cleaner, more uniform in twist with fewer ends down. You'll find your production going up, your costs coming down.

Texaco Spindura Oils cushion spindles against vibration, reduce hunting and lagging, help you prevent chafed yarn. You'll do away with the "drag" that wastes power . . . you'll be able to run heavy packages at full speed, with no loss of quality.

Use *Texaco Spindura Oils* on spinning, throwing, spooling and twisting machines. They meet all spindle manufacturers requirements, and there is a complete viscosity range to assure the right grade for every use.

A Texaco Lubrication Engineer will gladly work with you to increase efficiency and reduce costs throughout your mill. Just call the nearest of the more than 2300 Texaco Wholesale Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Tune in...TEXACO STAR THEATRE presents MILTON BERLE every Wednesday night. METROPOLITAN OPERA broadcasts every Saturday afternoon.

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Textile Industries

March, 1949

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Maynard L. Durham
Business Manager

Cliff Rutland, Assistant

Business Representatives

ARTHUR C. SHAW, 11 Monroe Road, Wellesley Hills, Mass. (Wellesley 3648).

WILLIAM K. HOFFMAN, 26 Bowdoin St., Maplewood, N. J. (South Orange 2-2484).

L. E. ALLEN, Madison-LaSalle Bldg., 173 West Madison St., Chicago, Illinois (Franklin 2086).

A. E. C. SMITH, 609 Caxton Bldg., Cleveland 15, Ohio (Cherry 7352).

J. D. PARSONS, 63 Barker St., Buffalo 9, N. Y. (Garfield 5532).

W. A. MCGEE, Box 562, Charlotte, North Carolina (3-4932).

LOYD B. CHAPPELL, Auditorium Bldg., 427 West 5th St., Los Angeles, California (Michigan 9849).

John C. Fonville
Editor

ASSOCIATES

J. Frank Guest
Milton C. May
G. M. Carby
Hunter Hughes (The Carolinas)
Paul M. Platzman (New York)

CONSULTING EDITORS

F. Gordon Cobb
Ben H. Crawford

J. A. Moody
Production Manager

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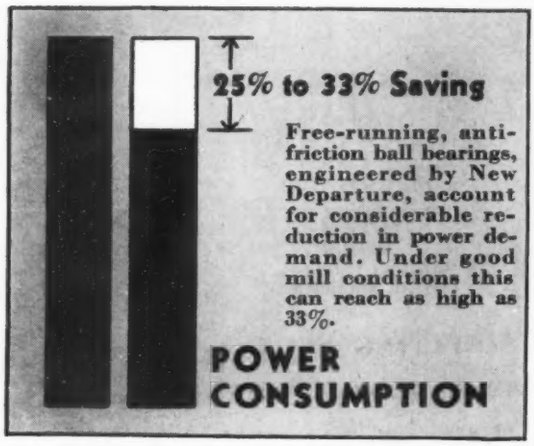
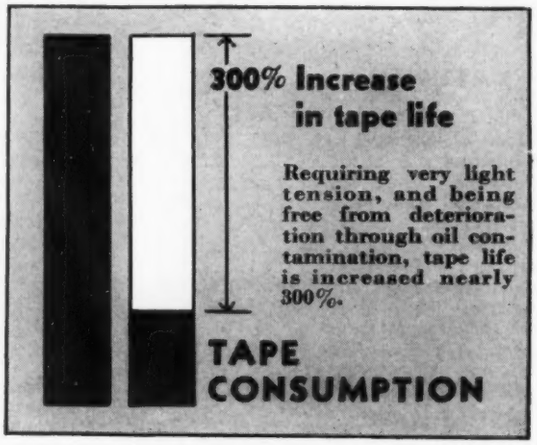
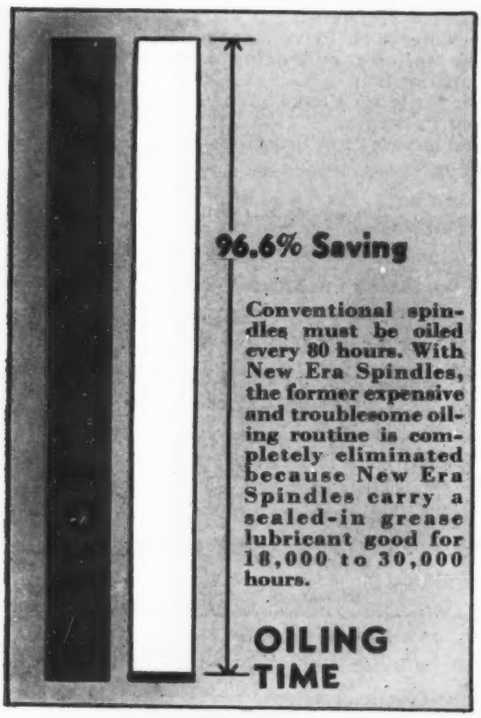
OPERATING ADVANTAGES
of the SACO-LOWELL
New Era SPINDLE


25% to 33% Saving
Free-running, anti-friction ball bearings, engineered by New Departure, account for considerable reduction in power demand. Under good mill conditions this can reach as high as 33%.
POWER CONSUMPTION


300% Increase in tape life
Requiring very light tension, and being free from deterioration through oil contamination, tape life is increased nearly 300%.
TAPE CONSUMPTION

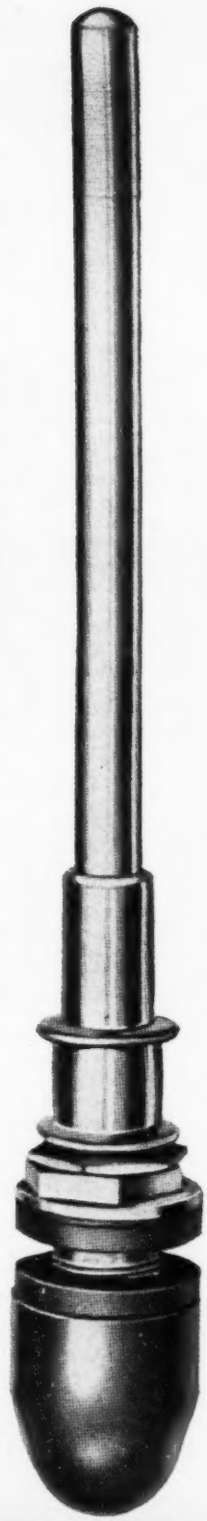

96.6% Saving
Conventional spindles must be oiled every 80 hours. With New Era Spindles, the former expensive and troublesome oiling routine is completely eliminated because New Era Spindles carry a sealed-in grease lubricant good for 18,000 to 30,000 hours.
OILING TIME

Because the yarn carrier is the only moving member, and the spindle blade is stationary, this NEW ERA SPINDLE is best described as

the spindle that DOESN'T REVOLVE!

Our new folder (available on request) fully explains this revolutionary spindle which offers the following important benefits in addition to those illustrated:

- **Saves 5 to 10 minutes in plumbing each spindle, through a simple precise plumbing device. Old methods of plumbing are eliminated.**
- **Excludes yarn spoilage caused by black oil from the bolster**
- **Resists vibration, creates no heat, throws no oil**
- **Leaves spindle rail dry and clean, free from oil, lint and smudge**
- **Embodies high load-carrying ability, at speeds up around 9750 R.P.M.**
- **Eliminates practically all wear on moving parts, through the use of specially-designed New Departure ball bearings**
- **Offers virtually complete freedom from adjustment, repairs, or parts replacement**



NOW AVAILABLE FOR GENERAL DISTRIBUTION. — If you plan to replace your present spindles or equip new frames, let a Saco-Lowell engineer tell you more about this completely new trouble-free New Era Spindle.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

Rayon Reports

New Cake Cover Now Printed for quick, positive identification

An indelibly printed disposable cake cover—hailed as the first "infallible" method of identifying rayon yarn—has been worked out by Avisco research men. All the information needed in processing rayon—denier, direction of twist, degree of luster and lacing notice, is discernable at a glance. Thus, the new cover will largely eliminate packing errors and the mix-ups which have complicated the problem of storage. In addition, it immediately signals "right side up"—an important factor in efficient winding.

The cover is printed with a special ink that is impervious to sulphuric acid, strong alkalis, bleach, gelatin and oils—as well as soaping, tinting and dyeing.

Since its introduction last summer, the disposable paper cover—an exclusive with American Viscose Corporation—has won widespread acceptance in the textile industry.

Users have commented favorably on the elimination of the 5-cent deposit required by the conventional knitted cover and the associated handling and bookkeeping required. Now, the addition of a printed label eliminates identification hazards.

The first Avisco rayon cakes with the new printed covers are expected to be shipped this month from the Roanoke, Virginia plant of American Viscose Corporation.

Avisco sponsors development of better use tests for rayon fabrics at Penn State College

To develop laboratory tests which will accurately show what will happen to rayon fabrics when used, Avisco for six years has been supporting a research program at the Ellen H. Richards Institute of Pennsylvania State College. The work includes the development of accelerated aging tests for fabrics exposed to light, heat, humidity, atmospheric gases, perspiration, abrasion, laundering and dry and wet cleaning. Tests involving a combination of these agencies are also being devised. In addition, wearing tests are being run at the same time as a check on the accuracy of the trial laboratory tests.

Research workers at the Ellen H. Richards Institute have shown that many of the textile tests now in use—while they do screen the extremely bad fabrics from all others—have limited value in predicting what will happen in use. The purpose of the Institute's work is to develop laboratory tests sufficiently rigorous to simulate what happens to fabrics in the consumers' hands. The information resulting from these tests will aid in improving the construction of rayon fabrics and the finishes and dyes selected for them. The results of the Institute's work to date are available on request in pamphlet form.

RAYON 20 YEARS AGO

NEW YORK, March, 1929—Rayon is entering another field. It is now possible to purchase rayon fabrics for upholstering automobiles.

MANCHESTER, ENGLAND, March, 1929—Exhibitors at the British Industries Fair are showing printed rayon hose—the latest English fashion.

NEW YORK, March 1929—Original designs intended for use on rayon fabrics are now being registered by the Design Registration Bureau of the Silk Association. Formerly only designs intended for costume silks were accepted.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

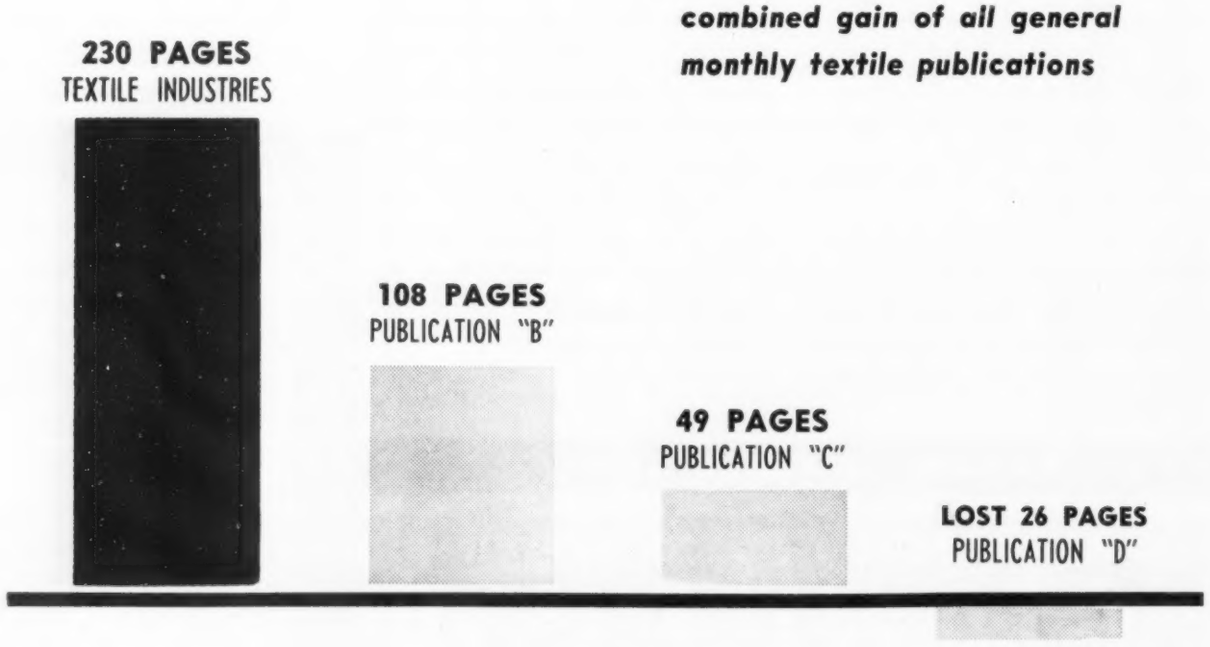
AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

TEXTILE INDUSTRIES' increase in advertising pages for 1948 over 1947 more than twice as much★ as any other monthly textile publication

★ *T. I. gain far exceeded total combined gain of all general monthly textile publications*



here are the reasons for this TREND:

MORE MILL CIRCULATION

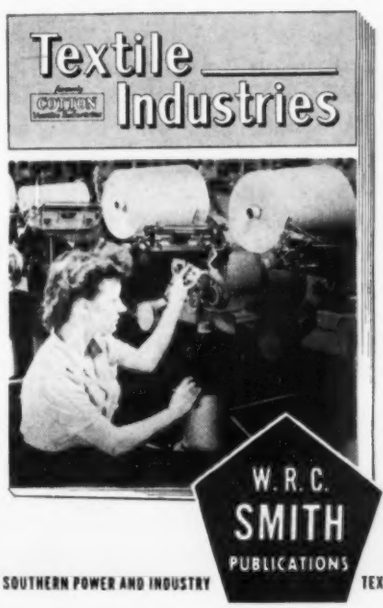
TEXTILE INDUSTRIES has more actual domestic mill circulation than any other textile publication—1,774 more (13.7%) than the next paper. This is *buying* circulation, not reached otherwise.

BETTER BALANCED COVERAGE

TEXTILE INDUSTRIES' circulation is far better balanced geographically, in relation to mill activity, than is the circulation of any other textile publication. Ask for the comparative facts.

MORE PROGRESSIVE EDITORIAL POLICY

TEXTILE INDUSTRIES, during the first 9 months of 1948, published 13.9% more production and mill management information than any other monthly textile publication. This more helpful editorial policy assures a more responsive readership.



Let TEXTILE INDUSTRIES help you develop maximum sales from this attractive market in 1949. Make T. I. your No. 1 publication

TEXTILE INDUSTRIES

The Production and Management Journal of the Textile Industries

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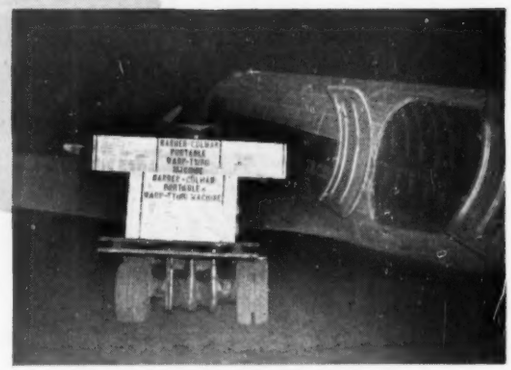
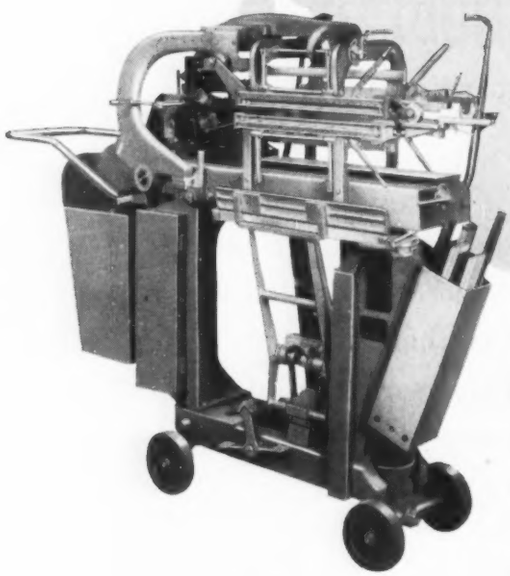
MODERN TEXTILE MILL IN CENTRAL AMERICA VALUES BARBER-COLMAN WARP TYING MACHINE HIGHLY ENOUGH TO HAVE IT SHIPPED BY AIR . . .



BOXES HOLDING A BARBER-COLMAN MODEL LC PORTABLE WARP TYING MACHINE ARE TRUCKED UP READY FOR LOADING INTO THE AIRPLANE

PRODUCTION SAVINGS WELL WORTH THE ADDED COST



MODEL LC

BARBER-COLMAN *Portable* WARP TYING MACHINE

MACHINE IS INSTALLED AND IN USE IN A FEW DAYS INSTEAD OF MANY WEEKS

Barber-Colman Portable Warp Tying Machines have proved their ability to pay for themselves quickly through savings over other methods of warp replenishment. In this particular instance, the purchaser of the machine saw enough savings in sight to justify having the machine shipped by air as soon as it was ready for delivery, thus gaining several weeks over shipment by ordinary methods. A Barber-Colman installer who was in the vicinity brought the machine to the mill the day after it was unloaded at the airport, with the result that it was in full use 2000 miles away only a few days after it left the plant at Rockford. The purchaser was Zimeri Hermanos, who operate an up-to-date and well-equipped mill, running a line of sheets and drills, near Guatemala City, Central America. The machine was a standard Model LC Barber-Colman Portable Warp Tying Machine.

AUTOMATIC SPOOLERS—SUPER-SPEED WARPERS—WARP TYING MACHINES—DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

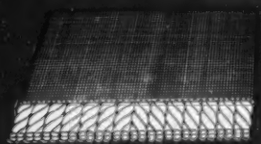
ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

It THRIVES on tough DRIVES!

GOODYEAR INDUSTRIAL RUBBER PRODUCTS

GTM-Specified COMPASS CORD ENDLESS BELT



Right-hand lay Left-hand lay

For Heavy-Duty Mill Drives

Note that the load-carrying cords on one side of the belt are right-hand twist — on the other side, left-hand twist. This patented Compass construction insures a balanced, true-running belt that will not "travel" on the pulleys.

For even-speed, smooth-running performance on critical mill drives, no belt compares with Goodyear COMPASS Cord.

One reason is that COMPASS is practically stretch-free — having far less than any other cord or fabric belt built today. That's because this super-serviceable belt carries the load in a layer of heavy-duty rope cords, spiraled continuously without a splice.

This unique, endless construction affords much greater strength and stamina. Result: COMPASS Belts are 25% thinner than other belts of the same power rating — assuring far longer flex life.

So on slubbers, spoolers, vertical openers, wherever belts find tough going, you can depend on COMPASS to do the job with unbeatable efficiency. The fact is, COMPASS will often deliver from two to more than four times the service of conventional belts — and the experience of countless mills proves it.

If you'd like that kind of belt performance on your hard drives, why not get the full story on COMPASS? Just consult the G.T.M. — Goodyear Technical Man — or write: Goodyear, Akron 16, Ohio or Los Angeles 54, California.

FOR HOSE, BELTING, MOLDED GOODS, PACKING — built to the world's highest quality standard, phone your nearest Goodyear Industrial Rubber Products Distributor.

Compass T.M. The Goodyear T. & R. Co.

GOODYEAR

THE GREATEST NAME IN RUBBER

Linit Fashion Show On Starched Cottons Set For February 2

The Linit Division of Corn Products Co. will stage a big fashion show, featuring starched cottons, in the Grand Ballroom of the Waldorf-Astoria on Feb. 2, it was announced yesterday. Fifteen top designers will each create three summer costumes keyed to the theme, "Fashion Accents Crisp." This is the first time a starch firm has ever staged such a promotion.

Plans are being made to accommodate more than 1,000 guests, including fashion editors, buyers, ready to wear and grocery store officials, laundry executives, department school faculty and national personalities, it was stated.

W. H. Gamble, president of Corn Products Sales Co., pointed out that the object of the promotion is to increase the use of starch in

Corn Products Plans Starch Sales Drive

Officials of Corn Products Refining Co., at a press conference at the Biltmore Hotel here yesterday, announced plans for a sales campaign for its "Linit" starch during 1949. Feature of the promotion will be a fashion show, first of its kind ever staged, at the Waldorf-Astoria on Feb. 2. A number of the nation's foremost fashion designers will create three advance summer costumes in starchable cotton each for the style show.

Plans for the promotion were outlined at yesterday's meeting by W. M. Gamble, president of Corn Products Sales Co., and Schmidt, vice president of Products Refining Co., on the effects of the February show on the laundry and dry cleaning fields. M. G. Rollins of McKenna of the C. L. advertising agency for the company, also spoke on campaign plans.

Textile Firms to Aid In "Crisp Look" Show

Ameritex, Avondale, Hat[illegible]

Crisp Look Bows Today; RTW Scout Inspires a Song

The "Crisp Look" became o[illegible] today (Wednesday) as hundreds of textile and fashion-fie[illegible] executives readied themselves for a fashion

Crisp Look

(Continued from page 1)

fining Co., makers of Linit Starch, will foot the bill. They pick up the Waldorf tab tonight too.

Meanwhile a large scale fashion offensive is being planned

Fashion accents Crisp!

1949 SUMMER PRE-VIEW

LINIT STARCH

Smash-Hit All-Time

be sponsored by the Corn Products Refining Company, producer of Linit, in the grand ballroom of the Waldorf-Astoria, Wednesday, Feb. 2, at 5 o'clock. New ideas in starchable cotton will be previewed by 18 foremost American designers. Maggi McNellis of radio fame will be the

26—The Berkshire Evening Eagle, Friday, Dec. 17, 1948

It'll Be 'Crisp Look' Next

By LEO TURNER

NEW YORK (UP)—It's going to be very easy for woman[illegible] stylish and [illegible] experts said do is turn [illegible] years, wash h[illegible] a tub of star[illegible]

Then be be[illegible]

That was t[illegible] tion of Miss [illegible] model and man[illegible] has made [illegible] ful. Suzi's [illegible]

She's the [illegible] signers wh[illegible] the 1949 fa[illegible] Be in a sho[illegible] shock the old[illegible] ing around t[illegible] off.

Hemline WH[illegible]

Want to kno[illegible] hemline is going[illegible] Miss Suzi B.

"It's coming u[illegible] she said. "The mi[illegible]

Want to know w[illegible] be called?

"The crisp look."

Do you want to [illegible]

originated? The [illegible] able [illegible] looked dis[illegible] dated woman of distin[illegible]

Never before such a flood of press, radio, television and newsreel raves as for the performance of "Fashion Accents *Crisp!*" produced by Corn Products Refining Company, makers of starches for the textile industry, at the Waldorf-Astoria Hotel's grand ballroom, February 2.

Featuring brand new summer fashions in starchable cottons by 17 leading dress designers, it formally introduced the "CRISP LOOK"—already accepted as THE fashion look for 1949.

...y of Starch About the New Cottons

NEW YORK HERALD TRIBUNE

The crisp look of summer cottons, due to arrive in stores in April, was glorified at a show yesterday in the Waldorf's ballroom. At left: Blue and black spider web cotton print, used by designer Ceil Chapman for an after five o'clock dress. At right: Carolyn Schnurer's summer evening dress of white piqué has wide lace inserts. Not too grand for soap and starch

The 'Crisp Look' Dance

Doreen Morgan of Jackson Heights and Fred Horam of Astoria demonstrate the "crisp look" dance, named for the crisp look styles that will be unveiled Feb. 2 at a Waldorf-Astoria fashion show. Arthur Murray, the maestro who created the dance, predicts that it will sweep the country.

"Linit" Style Show Tie-Ups Announced

At a press conference yesterday the Corn Products Sales Co., makers of "Linit" announced plans for a fashion show featuring "The Crisp Look," Feb. 2, at the Waldorf-Astoria, as previously reported Dec. 2 in WOMEN'S WEAR DAILY. Details that will mark the opening of a merchandising program stressing the freshness of washable and starchable cottons were enlarged upon and tie-in promotions with textile firms, and ready-to-wear manufacturers in advertising, department store displays, and in grocery stores were summarized.

Just Between Us

By CLARE LEWIS

WILL IT BE THE 'CRISP LOOK' FOR SUMMER RATHER THAN THE OLD DRAPE?

P. S. Department: Didja know that the trend for this summer's styles is towards starchable cottons? . . . so fashion authorities are saying . . . it's to be "The Crisp Look". . . There are only about nine more days to get your entry in to the essay contest being sponsored by the New York City Federation of Women's Clubs . . . title must be Women's Contribution in the 20th Century," any member of a federated club is eligible and the awards include magazine subscriptions and books . . .

Show Launches Top Promotion of Fashions in Cottons!

YORK WORLD-TELEGRAM, WEDNESDAY, DECEMBER

...ines & Linage

'Crisp Look,' Coming Next in Fashion, To Be Sparked by Starch Maker

Crisp Look' Makes Return

by Dena Dennis

One of the nicer things

Linit's 1949 Drive to Be Kicked Off with Fashion Show

NEW YORK—Feature of Corn Products Refining Co.'s 1949 promotion of Linit starch will be a gala fashion

Accent Is on Crispness At Starched Fashion Show

names out and is the king-pin in the field. And it also feels that Linit will be the most acceptable for this fashion wrinkle. . . . Memo for the future: Corn Products is now market-testing a new

versary of her birth.

Back in the old days, there was a fashion which your grandmother s

through department stores and retail shops later in the season.

Linit will capitalize on the promotion incident to the style show by featuring the importance of starching for high fashion cottons in full-color ads in *Capper's Farmer, Country Gentleman, Farm Journal, Household, Ladies' Home Life, McCall's, Modern Screen, Motion*

CRISP lounging costume, by Theo Teuri, consists of a tie-ruffled, white eyelet peignoir and ruffled cotton pantaloons. From the Linit show.

Summer's new look, judging from the gala showing of warm-weather fashions at the Waldorf yesterday, will be crisp as a little girl's first party pinafore. Seventeen top designers were represented in the production "Fashion Accents Crisp" sponsored by Linit Starch.

Spanking-starched cottons were starred in clothes for travel, beach and sports wear, lounging, cocktails and evening.

Pique beachcoats, denim pedal-pushers, sarong-draped cabana outfits were all shown in starched versions. So were dressy cotton prints trimmed with net and organdy, sun-back dresses with jackets, ball gowns of marquisette, organdy and printed pique.

Designers represented included Miss L. Brogan, Cell Chapman, Jane Derby, Nelly Don,

COTTON WITH A CRISP LOOK

THE NEW YORK TIMES.

Beige, black and white tones in a two-p... with a brief jacket covering a strapless bodi... showing yesterday at the Waldorf-Astoria H...

and it's just the beginning

The "CRISP LOOK" of starchable cottons continues—and *will* continue to make headline news in the press, on the air, via television and newsreels, in fashion editorial copy . . . will be aggressively promoted by textile houses, dress manufacturers, magazines . . . in department store advertising the country over.

. . . *and in the year 'round, full-color LINIT campaign in 16 national magazines with combined circulations of more than 34 million!*

DAILY MIRROR

...but the musicians ...ver wear 'the wilted look' i... here," Wild Bill Davison told me. The famed trumpet player says hat the teentimers' new "crisp ook" has to last through both

...ular short styles.

A pace or two from ...ditional Bertolotti's is the ... contrast of the ... Eddie ... vous ...

...ace ...n of ... when ... will ... "The ...

Crisp Look

More than ... pected to attend the ...ent, including fashion editors, buyers, ready to wear and grocery store officials, laundry executives, design school faculty and outstanding national personalities.

...s are ex-

...which has been en-

Corn Products Sales Co.

17 Battery Place, New York, N. Y.

STARCHES FOR THE TEXTILE INDUSTRY

...You're Due to ...And Crackle Th...

By GERTRUDE McALLISTER
Woman's Editor

Let's see now. What was it Bea Lillie ...t the March of Dimes fashion show—whe... her comment on the "crisp look" of ...omething like this: "You may not have t... ...u'll be stiff as a board!" Haw! ...But that's about the size of it. ...ith our clothes remaining ...etty much this season as they ...re last year—though more ...derate in length and width ...skirt—the fashionists must ...r something new to talk ...ut. And it is the "crisp look."

Taffeta, th... will probably ...lar of all fabr... the designers ... it. They're ...

BROOKLYN ...oming. It has ...ound and most women ...ke that, we have observed. Whether it is draped or whirling freely, it does have a crispness.

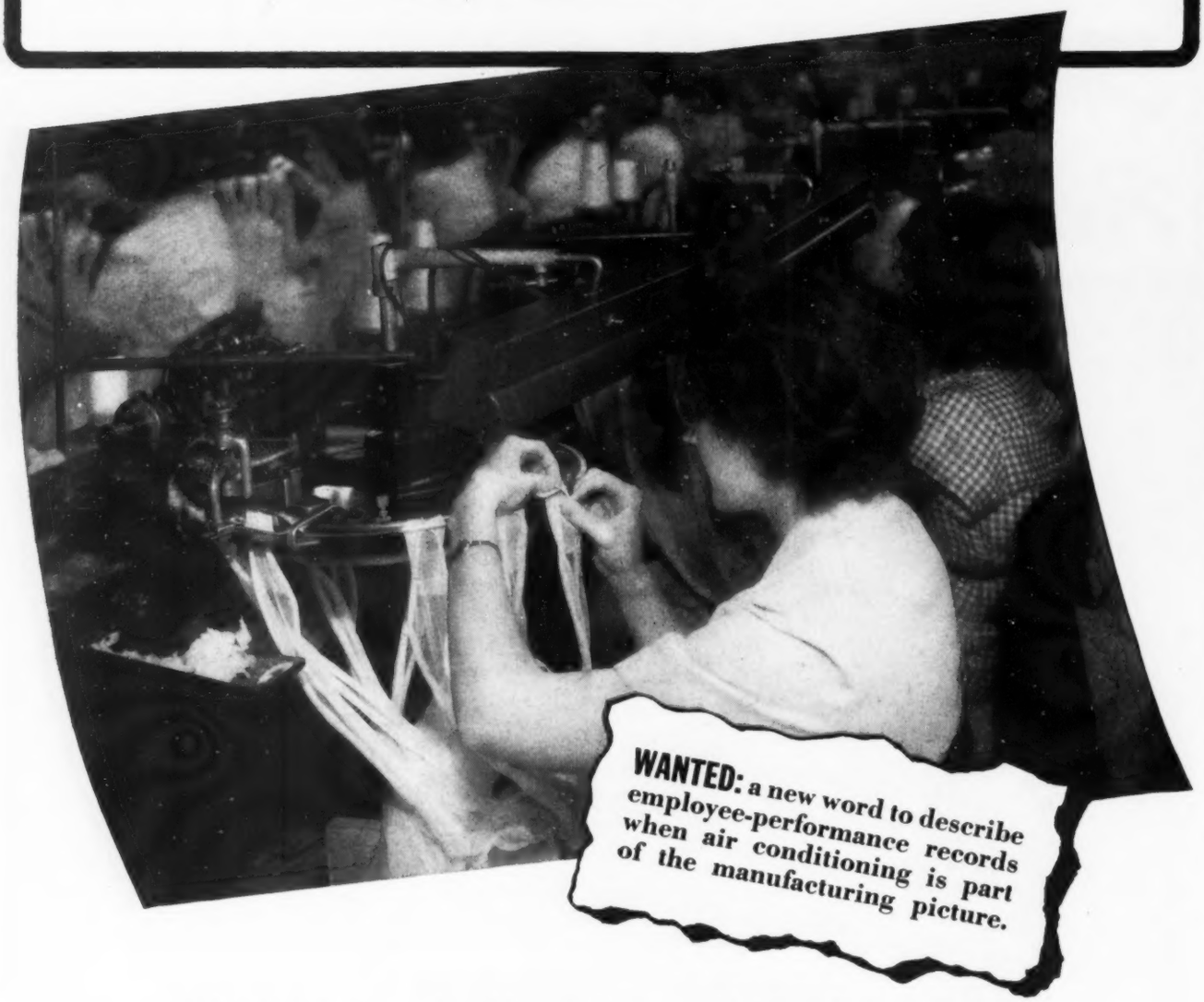
...nce starched gar... ments stay fresh-looking longer. At least that has been our experience—with two little girls in the family. Why shouldn't mother do likewise?

...the world of fashion ... it, the New Look drooped. Limp la... and on some, the blimp look—would describe it.

The Crisp Look, though—that so... better. It promises to be worth a sec... look, perhaps even a whistle.

One of the top ... mentators, Miss Maggi McNellis, whose program "Luncheon with Maggi McNellis and Herb Sheldon at the Latin Quarter" is heard Monday through Saturday over station WJZ, has been retained as commentator for a big time "Crisp Look ... Show" at the Waldorf As...

What is the opposite of "ABSENTEEISM"?


WANTED: a new word to describe employee-performance records when air conditioning is part of the manufacturing picture.

Only a brand new word could suggest that combination of regular, and dependable attendance, high morale, low turnover, loyalty and high efficiency that air conditioning brings to plant operation.

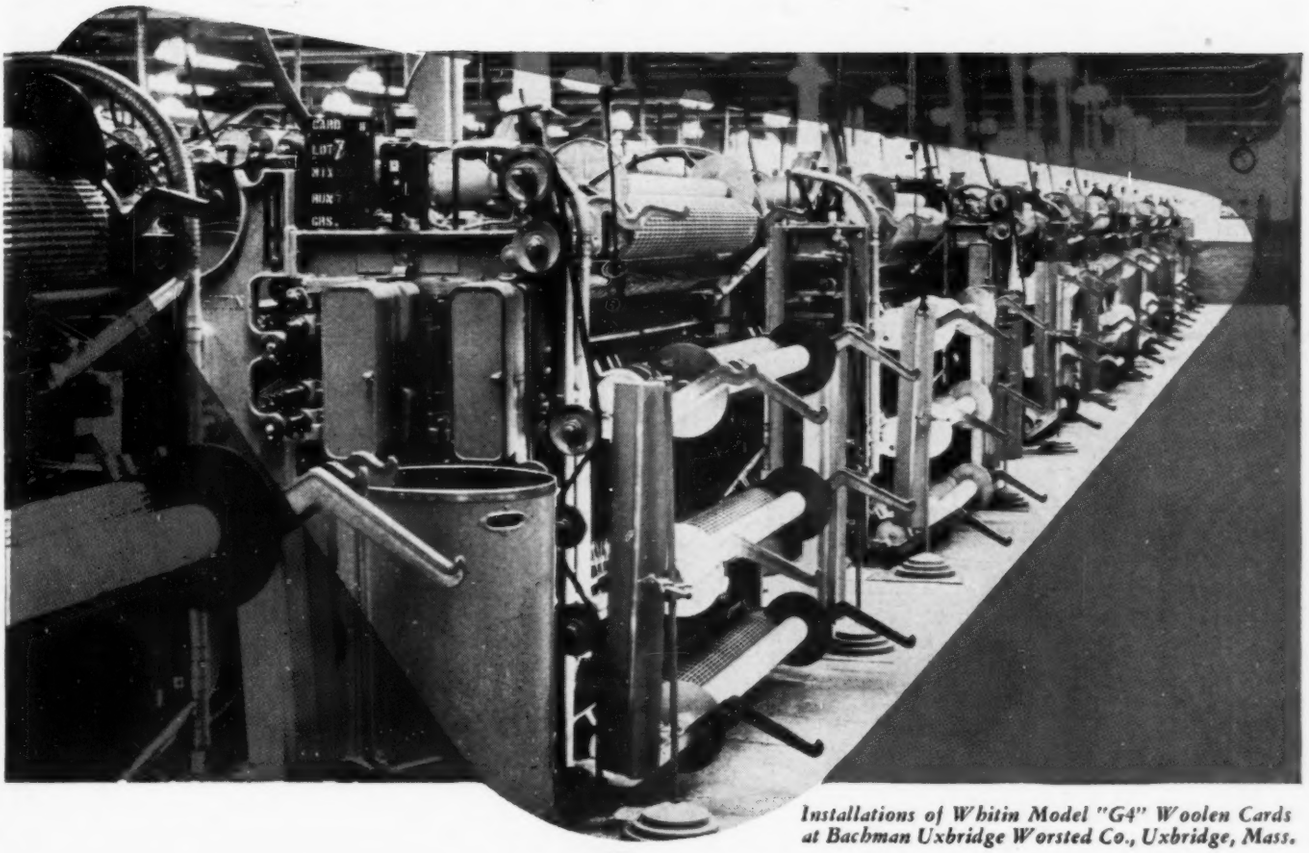
In the textile industry, these benefits can be translated directly into profits. They mean improved quality of work . . . fewer rejects and seconds . . . steady, year 'round production . . . increased summertime production, etc.

Today, York-equipped air conditioning installations are bringing these benefits to an increasing number of progressive textile mills. York engineers —experienced in textile operations—are prepared to supply your plant engineer, consultant and contractor with specific information—as to equipment, capacities and performance to fit your particular needs.

York Corporation, York, Pennsylvania.

YORK *Refrigeration and Air Conditioning*

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



Installations of Whitin Model "G4" Woolen Cards at Bachman Uxbridge Worsted Co., Uxbridge, Mass.

CARD ROOM *Efficiency* . . . a Vital Cost Factor

WOOLEN mills today find themselves in a keenly competitive market—a market where proper analysis of all *cost factors* is of major importance. To keep abreast of such conditions it is imperative that all manufacturing operations be placed on the most efficient operating basis possible.

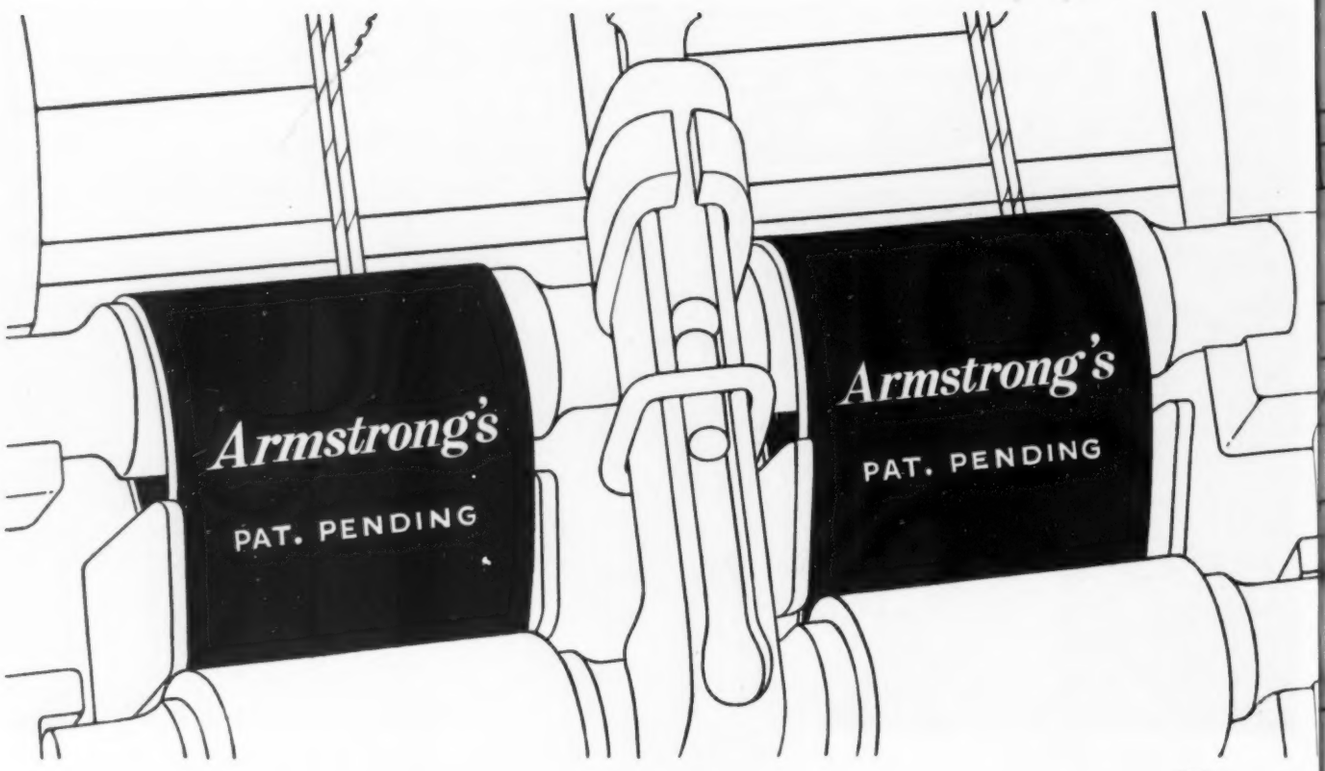
Carding is an *important cost factor* in the manufacture of woolen yarns. Not only is it important by itself, but also because of its cost effect on all subsequent operations through to finished yarn.

The importance of Card Room efficiency therefore should not be minimized. The quantity, quality, and continuous output of the Card Room sets the pace for the entire production of the mill. Impaired efficiency (and it is not always easy to detect) at this vital spot can easily lower the general efficiency of all other departments.

Why not discuss your carding problems with a Whitin representative? He will be glad to explain how Whitin Model "G4" Woolen Cards effect definite savings through greater production, better quality and increased efficiency with low maintenance and "down time". Write today for illustrated catalog of Whitin Card Room Machinery.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS
CHARLOTTE, N. C. • ATLANTA, GA.

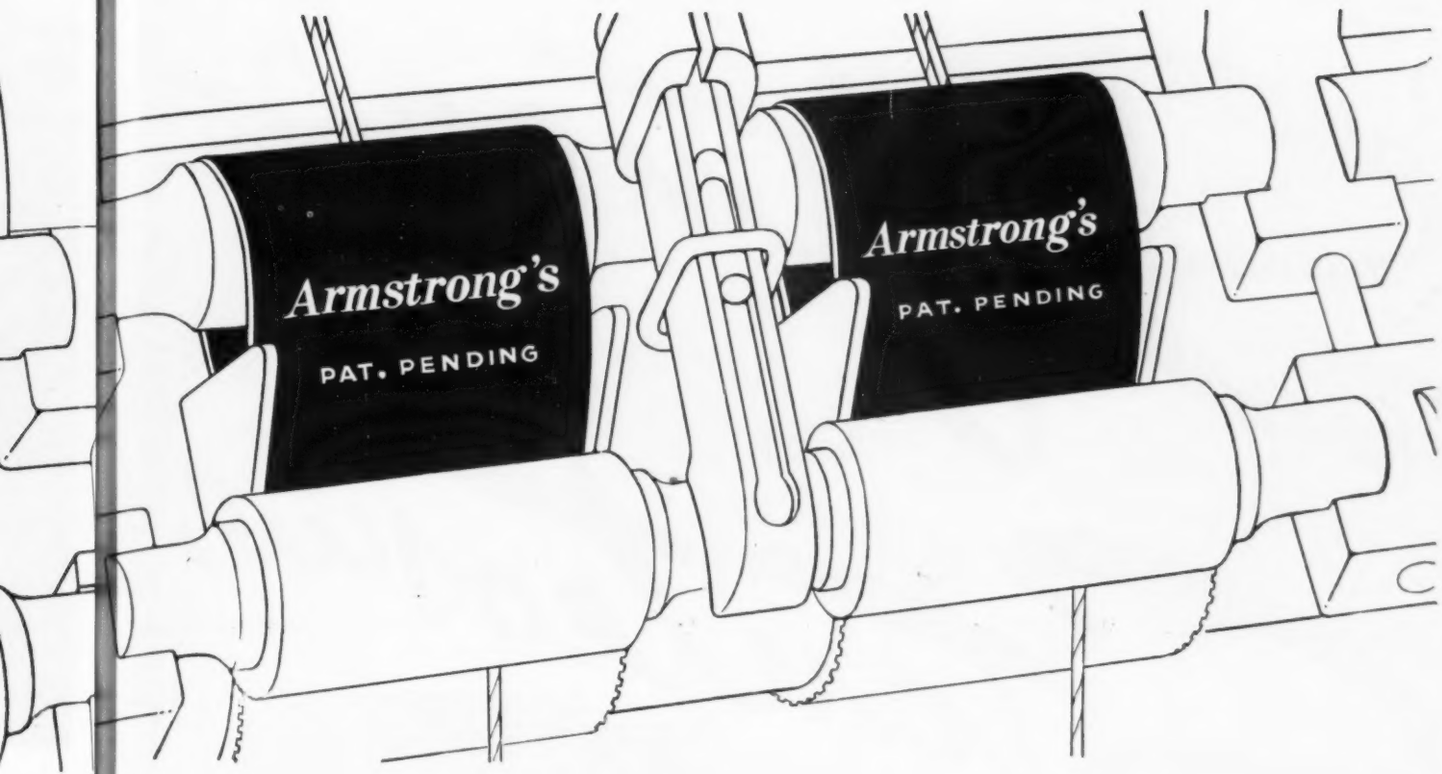


Accotex Aprons w

ACCOTEX COTS ... *by the makers of Accotex Aprons*

ACCOTEX J-490 . . . A plain synthetic rubber covering especially useful where synthetic fibers are run on cotton system equipment or wherever maximum lap-resistance is necessary. After long initial service life, J-490 cots may be rebuffed 5 or 6 times. For minimum eyebrowing, use J-490 with revolving clearers. **ACCOTEX NC-727** . . . A cork-loaded synthetic rubber cot that combines the superior drafting properties of cork with the long life of rubber. Because of the cork content, NC-727 produces less eyebrowing than any other synthetic cot. It will not slick up and drafts a more uniform and stronger yarn. May be rebuffed for extra service lives. Used with flat clearers. Whether you are spinning cotton, wool, or synthetic fibers, Armstrong can supply you with a cover especially formulated for the job. Your Armstrong representative will gladly arrange a test installation in your mill. These coverings are available for export.

ACCOTEX COTS
CORK COTS



won't grow or stretch

Armstrong's interliner prevents stretching

You don't have to worry about stretching or growing when you use Armstrong's Accotex® Aprons on your frames. Accotex Aprons are reinforced by a cord interliner developed exclusively by Armstrong.

This interliner prevents stretching, keeps tension constant, and helps spin even, strong yarn of high quality. Even after years of constant service in the mill, Accotex Aprons still fit snugly on the form on which they were made.

Accotex Aprons wear longer, too. Heavy layers of tough synthetic rubber enclose the cord interliner and provide a tough wearing surface on both inside and outside of the Apron. Because the rubber is ground to the exact thickness you specify, there are none of the dimensional variations found in natural products.

There are no seams in Accotex Aprons to crack or tear open. Neither will these aprons scuff nor abrade.

They run cleanly with reduced waste. They are not affected by oil, temperature changes, or humidity, and they perform with a minimum of lapping.

Ask your Armstrong representative for free samples, prices, and additional information on Armstrong's Accotex Aprons. Available in sizes for both single and double apron types. Armstrong Cork Co., Textile Products Dept., 3603 Arch Street, Lancaster, Pa.

ARMSTRONG'S ACCOTEX APRONS

For

Softness

USE

Stanteosine

substantive softener

For lasting desirable softness on all fabrics and yarns.

No discoloration or odor development.

Minimum shade change and effect on light fastness.

Compatible with most finishing materials over wide pH range.

Permits controlled exhaustion from bath.

Write today for Stanteosine
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BECAUSE a tremendous amount of hauling is eliminated with a Cleveland Tramrail system at one of their mills, the executives of Fieldcrest Mills, Division of Marshall Field & Company, Inc., with main offices in Spray, N. C., are enthusiastic over their overhead materials handling equipment in this mill.

Cleveland Tramrail is used in many departments. It has been found especially advantageous for the handling of beams. Since it is desirable to keep 70 to 80 warp beams ahead of the slashers, considerable space is required for their storage. Cleveland Tramrail enables them to store the beams three high when space is lacking and thereby get more beams into a given area. Also any beam can be picked up and moved direct to slashers without moving other beams on the floor.

It now takes about one-fifth the time formerly required to place beams into a slasher. It is much easier on the men, too! Possibility of strained backs is removed and safety is greatly improved.

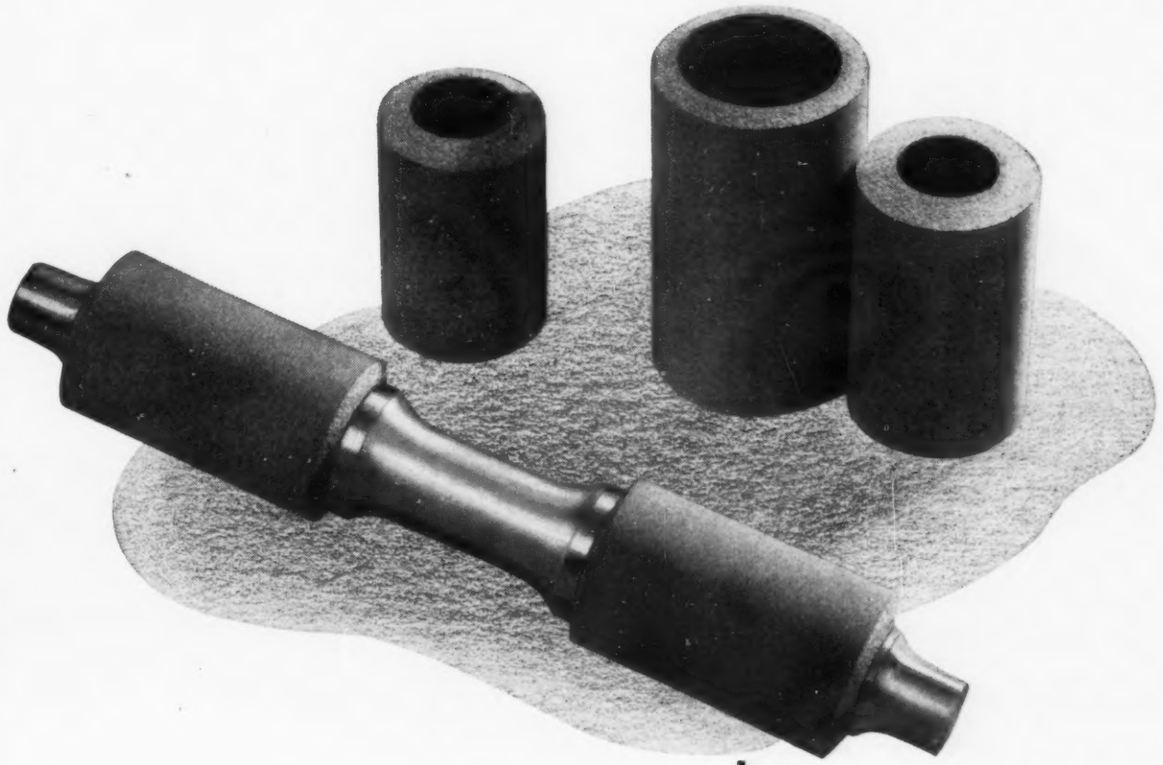
Cleveland Tramrail is aiding dozens of textile mills accelerate production, cut costs and better working conditions.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
2866 EAST 287th STREET • WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

No more eyebrowing

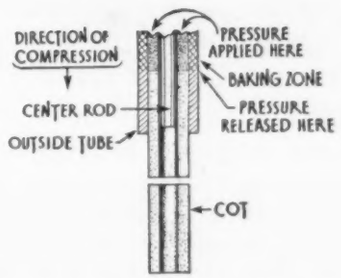


Armstrong's Cork Cots carry waste well back onto the clearer boards where it cannot form eyebrows and be nipped into the work. They reduce clearer waste as much as 50%. Thus you minimize clearer picking and have fewer slubs in the yarn when you spin on cork.

Cork's extra friction also helps produce a more even and therefore a stronger yarn. Cork's resilience further means fewer ends down. Your operators do less piecing up. Cork recovers quickly from hard ends and roll laps. It will not flatten during shutdown periods or flow under roll weighting.

Ask your Armstrong representative for samples, prices, and additional information. Or write Armstrong Cork Company, Textile Products Department, 3603–A Arch St., Lancaster, Pa.

Extrusion Process Produces Seamless Cork Cots



Armstrong's Extruded Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn.

ACCOTEX IS A REGISTERED TRADE-MARK

Better running work . . . more poundage

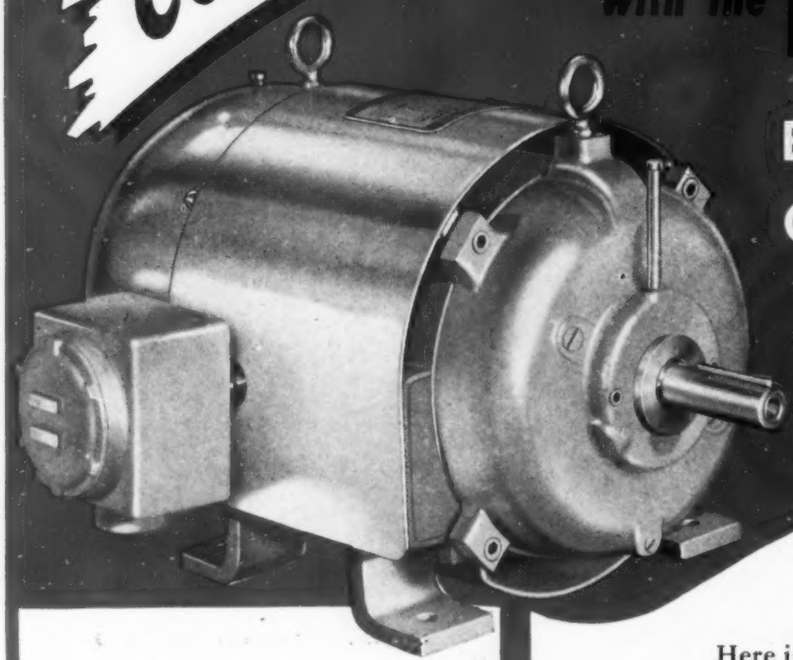
ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS

COMPLETE INSURANCE

with the **RELIANCE**

EXPLOSION-PROOF and CORROSION-RESISTING MOTOR



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Here is the result of Reliance engineering applied to the problem of protecting motors that operate in either corrosive or explosive atmospheres. Frame and fan covers, fan, conduit box and end brackets are all made of selected corrosion-resisting materials. In addition, many extra steps are taken to achieve maximum protection, such as coating screws, counterboring screw holes and fitting-up with special compounds.

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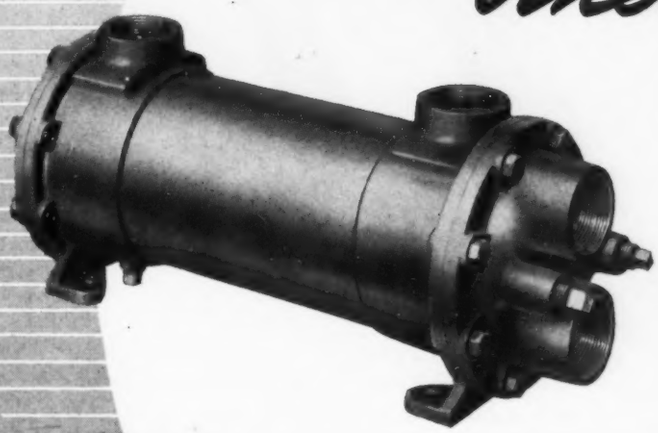

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The designs in bobbins, shuttles, cones, rolls, spools that U S makes to meet the exact specifications of each customer add up to thousands! And that's because U S has the know-how and the experience to produce each design to order—and with *"production line" efficiency.*

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To every U S product, embodying your ideas, is added the extra advantages of accurate dimensions, uniform contours, wear resistance—advantages that mean smooth operating performance that reduces waste and improves your product. It pays you to come to U S wtih your equipment needs!

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U S representatives cover every field of textile production, and can offer thoroughly experienced advice on the use of U S products in any process.

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U S has cooperated with textile machinery manufacturers for nearly a century—and can meet the closest possible limits of tolerance in all tests for dimension, weight and balance.

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Let us cite a single example. The problem: to ascertain the relative static-charge hazard of various materials in mill operation. The solution: Testing Company experts, upon completion of the research project, developed a machine which measures accurately the static charge of fabrics by means of an electrostatic voltmeter. The materials are rubbed over such surfaces as hard rubber, metals, coated surfaces, or other fabrics, and the relative static charges recorded.

Result: the client can now gauge the relative static-charge hazard of every type of material processed in his mill and, for the first time, can take scientifically pre-determined precautions.

If you are faced with similar problems relating to textile manufacture, regardless of their nature, we invite inquiries. We shall be glad to discuss the possible application of Research to your problems without obligation on your part.

THE

Research Division

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Every spinner and knitter is a veteran of the "Battle of the Bulge." He knows that cones which bulge at the nose are enemies of good knitting.

One of the frequent causes of bulging is too low an angle of wind for certain types or counts of yarn, and Foster long ago won the "battle" by making it possible to vary the angle of wind on the Model 102. By changing four small gears in the head end of the machine nine different angles of wind from 9° to 18° are obtainable.

We will be glad to recommend the proper angle of wind (and to supply gears to obtain it) for any given type and count of yarn.

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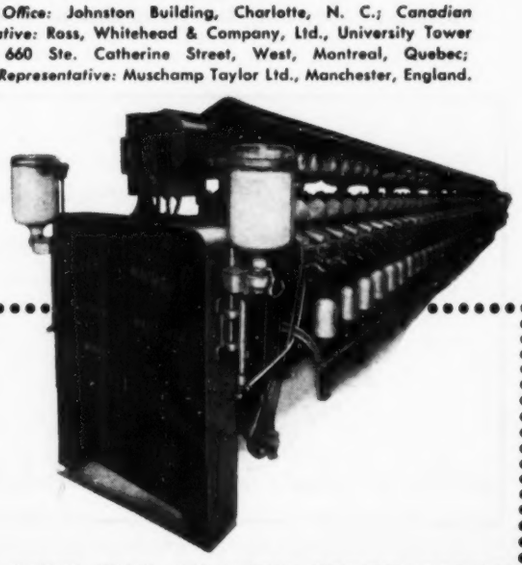
Southern Office: Johnston Building, Charlotte, N. C.; *Canadian Representative:* Ross, Whitehead & Company, Ltd., University Tower Building, 660 Ste. Catherine Street, West, Montreal, Quebec; *European Representative:* Muschamp Taylor Ltd., Manchester, England.



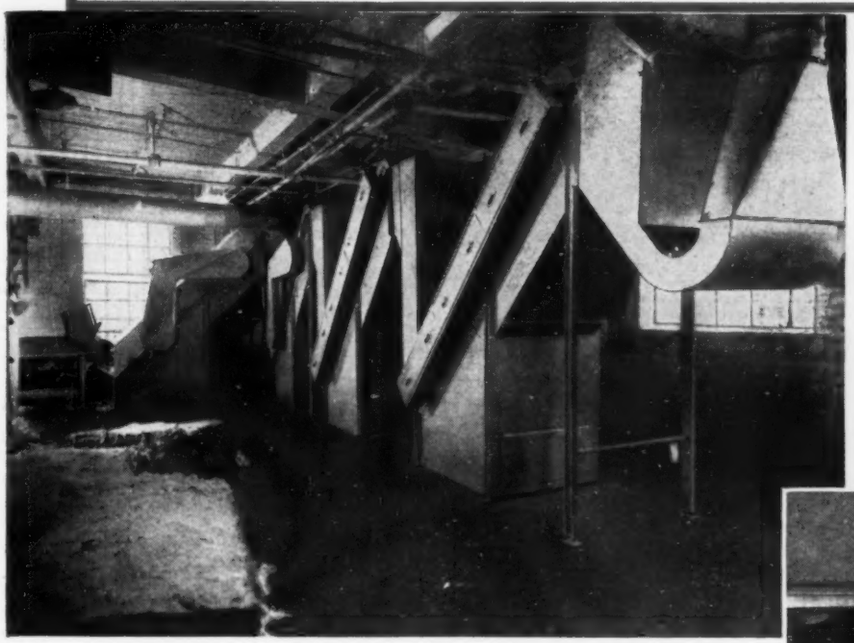
FOSTER MODEL 102

The Flexible Winder

COTTON, MERCERIZED, WOOL, WORSTED MERINO, SPUN SILK OR SPUN RAYON YARNS

Now! A PERMANENT NON-ELECTRIC MAGNETIC PULLEY FOR AUTOMATIC TRAMP IRON REMOVAL

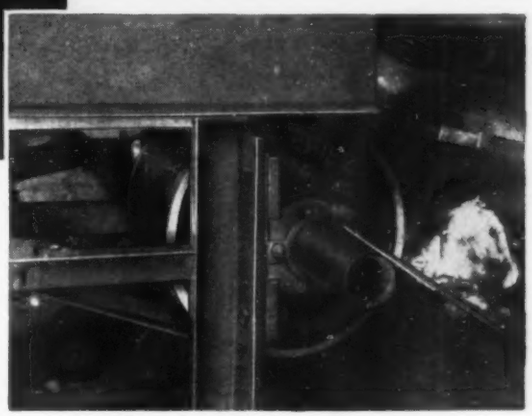
Developed by Eriez



ERIEZ Non-Electric Permanent Magnetic Pulley installed in opening room at Shuford Mills No. 2, Granite Falls, N. C.

ERIEZ Permanent Non-Electric Pulleys gives you these Advantages.

- Automatic Tramp Iron Removal.
- No Wiring for Electric Current Needed . . .
- Cool Running . . . No Loss of Magnetism Through Heating Up
- Not Affected by Moisture or Wet Materials.
- No Operating Costs . . . First Cost is Last Cost.
- Minimum Installation Cost.
- Simple . . . Powerful . . . Permanently Magnetized.
- Uninterrupted Operation . . . Top Efficiency Always.
- Easily Installed in Original Equipment.



Close-up of Eriez Pulley in operation.

HERE'S the newest, most effective way to automatically remove tramp iron from textile fibers . . . Eriez Permanent Non-Electric Magnetic Pulleys ahead of opening and other processing equipment do away with tramp iron damage . . . Installed as a head pulley, the powerful magnetic field penetrates canvass or rubber belts, pulling iron out of your fibers and discharging it automatically. No manual cleaning is required.

Many mills, such as Shuford Mills (who use eight Eriez pulleys), find the installation of Eriez Magnetic protection a vital factor in recording savings on their cost sheet. Visualize these savings on your own cost sheet! No cost for operation or maintenance . . . the elimination of fires and subsequent cost in destroyed material and time lost in production shutdowns . . . the minimizing of expense for replacement parts and labor necessitated by damage to machinery caused from tramp iron . . . Yes, they really add up—and Eriez can quickly and effectively eliminate them. The cost is low—the savings great. *Write for complete information and recommendations today.*

A Few Typical Eriez Pulley Users

Manhattan Felting Mills
48 Hamilton Ave.
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The American Thread Co.
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Avondale Mills
Sycamore, Alabama
Pell City, Alabama

Celanese Corp. of America
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Belvidere, N. J.

Goodyear Clearwater Mills No. 2
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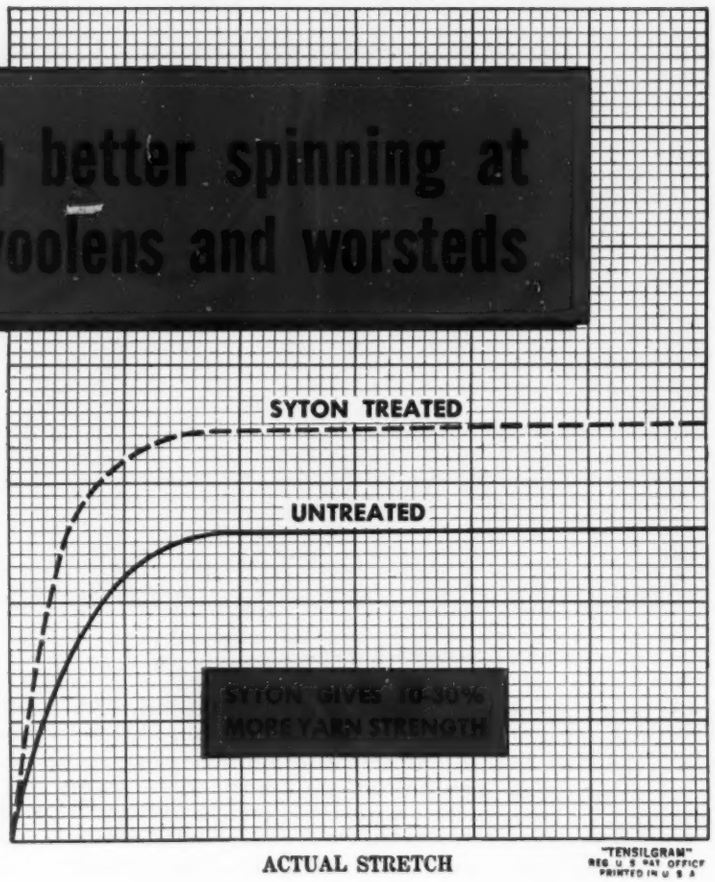
FOR YOUR INFORMATION

Henry L. Scott Co. Providence, R. I., U. S. A.

SYTON gives you better spinning at LOWER COST with woolens and worsteds

Laboratory tests and actual field experience show Syton gives 10-30% more yarn strength in woolen and worsted spinning



This added yarn strength means:

FASTER PRODUCTION: Because of increased yarn strength, the amount of twist can be reduced and production speeded.

LOFTIER YARNS: Less twist means loftier yarns, with tensile strength equal to or better than the strength of untreated yarns of higher twist.

HIGHER COUNTS: Closer to limit spin—for most grades of stock can be attained with Syton-treated yarns.

FEWER ENDS DOWN: Reductions vary from 25% to 50% depending on the grade of wool.

BETTER SPINNING EFFICIENCY: Syton produces more uniform yarn with less beard and thin spots, reduced fly waste, and better drafting.

WHAT SYTON IS:

Syton is a colloidal dispersion in water of submicroscopic silica particles which are deposited on the fibers, increasing fiber friction. The improved fiber "drag" increases yarn strength, results in better, more uniform draft control.

Even though our production was limited in 1948, more than half a billion yards* of acetate fabric have been woven from Stymer-sized warps! Now, more and more mills are adopting Stymer every week. Mill owners are enthusiastic because this new synthetic sizing agent gives warp superior protection over a wide range of humidities and temperatures . . . makes weaving easier on the loom.

Here's how Stymer delivers:

1. Forms tough, smooth, flexible film
2. Reduces static electricity troubles
3. Increases operational efficiency
4. Easy to apply
5. Produces more uniform film on yarn
6. Easy to scour from the woven fabric in warm water containing a mild detergent.

Remember:

IN SLASHING, Stymer does not stick to uncovered dry cans, stops static electricity troubles, separates easily at the lease rods, does not gel in the pipes or size box.

IN WEAVING, Stymer-sized warps exhibit little or no shedding, maintain yarn twist, have fewer end breaks.

Clip the coupon below for full information on this amazing new sizing agent for acetates, Stymer.

*Based on estimated average weight of goods sized with tonnage of Stymer sold

Syton, Stymer: Reg. U. S. Pat. Off.

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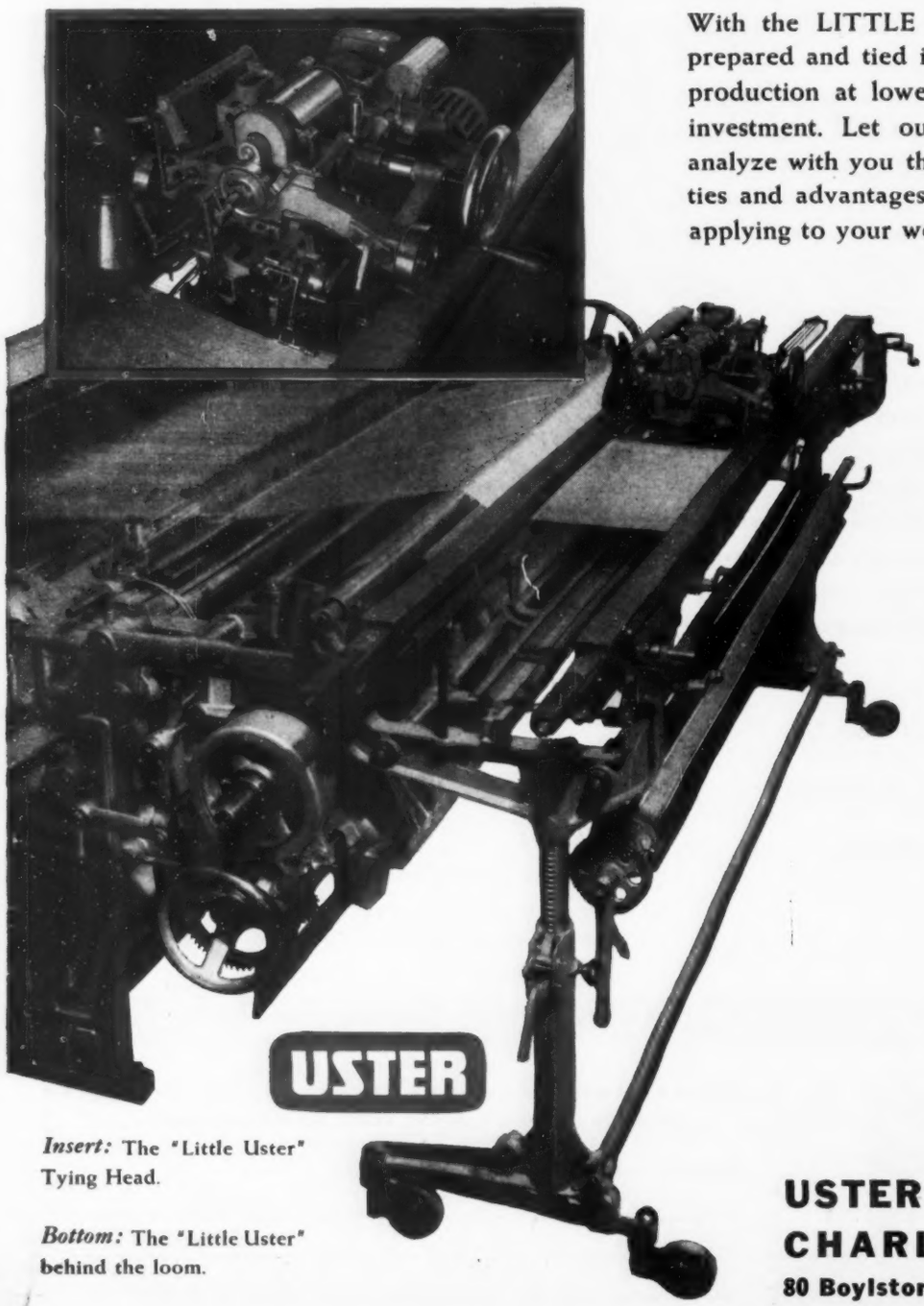
SERVING INDUSTRY WHICH SERVES MANKIND

120,000 Ends Tied in Eight Hours

A lot of ends when tying portable—but just a regular day's work for a LITTLE USTER operating in a southern mill. Yes, the conditions in this mill are favorable. Well prepared filament yarn warps of approximately 14,000 ends are being tied. The operator is well trained and skilled in using the machine.

An equivalent speed cannot be expected nor attained in every mill. Tying speed is dependent directly on material and operating conditions. However, whether tying the finest silks to the coarsest woolen yarns with the LITTLE USTER, the entire warp tying process is accelerated and simplified to the maximum degree.

With the LITTLE USTER, more warps are prepared and tied in less time, meaning more production at lower costs and with a lower investment. Let our experienced technicians analyze with you the money making possibilities and advantages of the LITTLE USTER as applying to your weaving mill.



Insert: The "Little Uster" Tying Head.

Bottom: The "Little Uster" behind the loom.

- Entire warp tied in one single "bite".
- Warp prepared for tying in one single continuous operation.
- New warp prepared on one loom while LITTLE USTER is tying on another.
- Adjustable in less than two minutes for tying any material.
- Ties a leased sheet to an unleased sheet, or ties with or without lease.
- Ties on loom (portable) or away from loom (stationary) with equal efficiency.

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CHARLOTTE 6, N. C.
80 Boylston Street, Boston 16, Mass.

Did You Ever Figure How

STE-HIDE SHUTTLES

Can Save You Money in Weaving Woolens and Worsteds?

They Definitely will do so

The tough, rugged Ste-Hide covering—Phenolic Impregnated Cloth—Increases loom hours per shuttle.

Abrasion resistance is so high—The surfaces become smoother as wear increases.

You will have difficulty wearing them out.

All the refinements you want in a shuttle.

Equipped with the celebrated #108 Eye Series with its superior advantages, including rear and center tensions and plain eyes all interchangeable, for standard and reverse winds.

Hard chrome plated pins throughout that will not cut.

Ask us for the complete story of how your costs can be reduced in Weaving Woolens and Worsteds.

Southern Shuttle Division

of STEEL HEDDLE MFG. CO.

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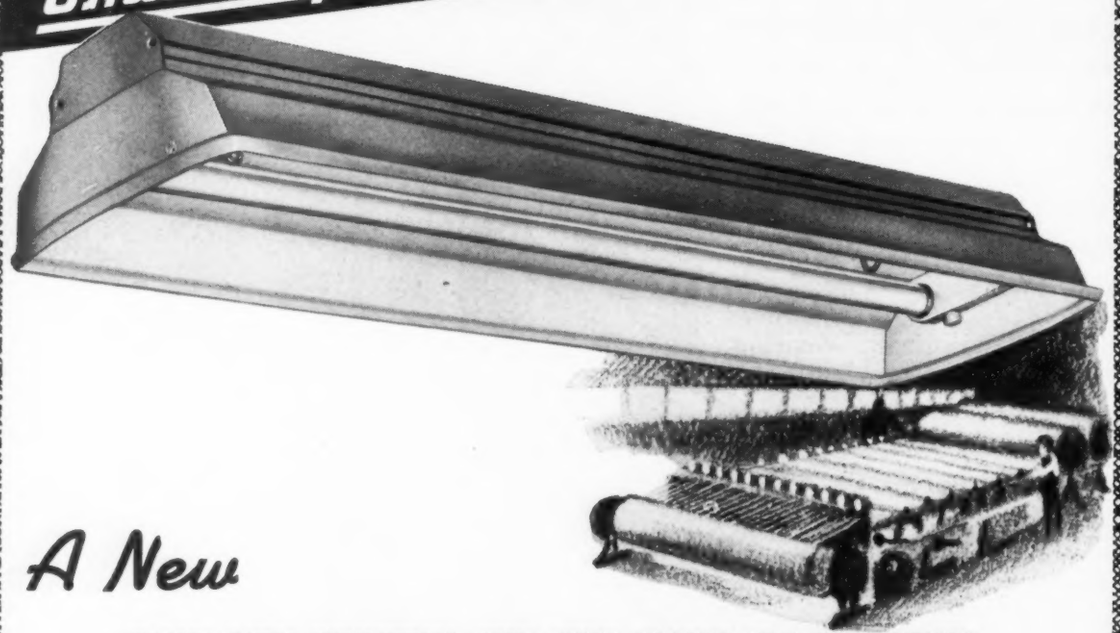
A new, modern Shuttle Manufacturing Plant is now in full operation at Paris, S. C.

THERE'S ECONOMY *in* Smithcraft LIGHTING

Smithcraft TURRETER—SERIES 5



A New

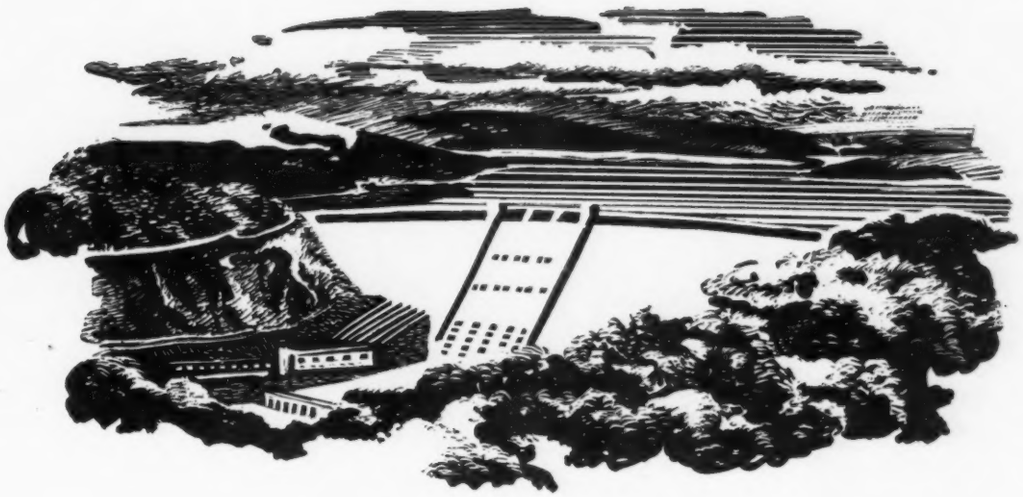
HEAVY DUTY INDUSTRIAL UNIT WITH CLOSED END REFLECTORS SPECIFICALLY MADE TO MEET THE RIGID REQUIREMENTS OF THE TEXTILE INDUSTRY

Turreter—Series 5 by Smithcraft is a heavy duty industrial fluorescent designed to withstand extreme conditions, provide higher lighting efficiency at lower cost, with minimum service requirements.

This new unit, for two or three 40-watt lamps, incorporates the new 5" turret sockets—assuring simplified maintenance and trouble-free operation. The use of electrolytic zinc-coated bonderized steel assures resistance to corrosion for longer fixture life. Reflectors are finished in lifetime porcelain enamel and held securely with the exclusive Smithcraft Fasloc fasteners, a development which assures simple maintenance. The channel, identical for both individual and continuous-row installation, is arranged for every type of mounting with convenient knockouts for electrical connections.

Smithcraft Turreter—Series 5 combines every desirable lighting feature to give more light in the working zone, with a minimum of maintenance and low cost. Specify Smithcraft Turreter Series 5—another outstanding fluorescent fixture by Smithcraft—manufacturer of America's finest fluorescent fixtures.

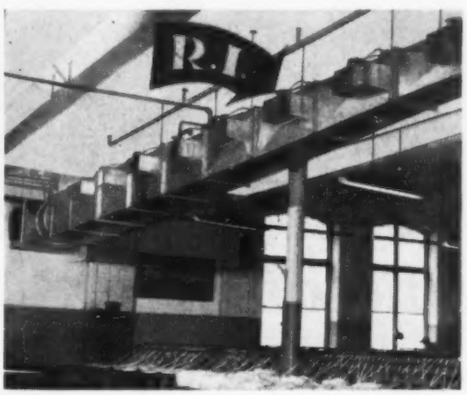
Smithcraft
LIGHTING DIVISION
CHELSEA 50, MASSACHUSETTS



controlled moisture

means better controlled production---

Vast irrigation systems bring moisture to arid lands. Textile production, like a head of lettuce, grows larger with the correct amount of moisture. Mills equipped with RIHCO Systems maintain correct humidity while room temperatures can be reduced to the right degree for labor efficiency and comfort. The RIHCO principle of humidification and evaporative cooling permits the use of smaller air compressor units, thus reducing installation and power costs. No matter what your textile process may be, you'll find it worth while to consult with a RIHCO engineer. Why not write us today?



Clean air is circulated through these ducts. Over each outlet a RIHCO Atomizer moistens and cools the escaping air. This patented RIHCO Atomizer internally mixes a separate air supply with a fine jet of water. This mixture emerges to normal atmospheric pressure with an explosive expansion that completely vaporizes the water. Evaporation lowers the temperature. Predetermined quantities of outside air are introduced as required to maintain a uniform blanket of cool, moist air over the entire room. Automatic controls economically hold an exact humidity while temperatures are reduced to a reasonable level.

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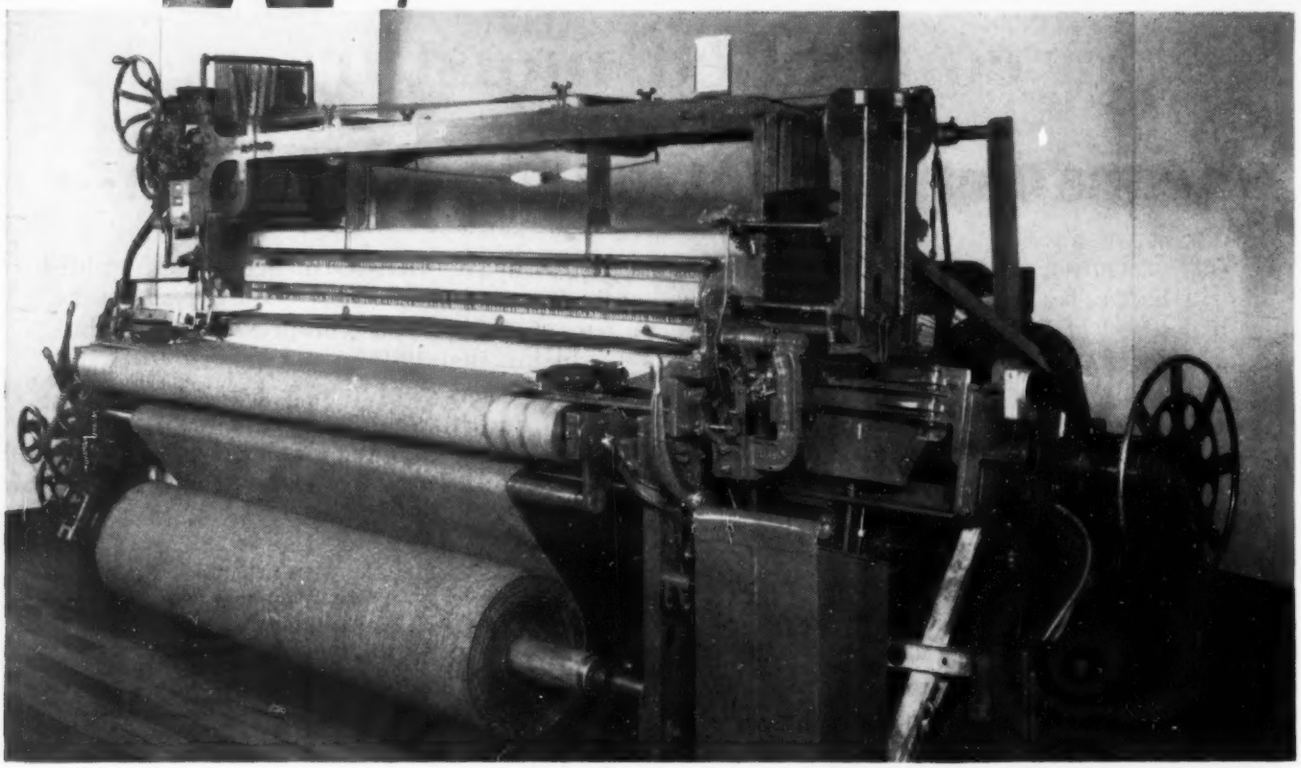


. . . in these NEW C&K W-3 ALL-PURPOSE LOOMS

Like any Olympic Decathlon winner, this new W-3 was challenged to prove itself the top performer in many different competitive tests.

Now, thoroughly proven by these tests, here is the world's most versatile loom for weaving worsted, woolen or blended fabrics. No other loom can offer the advantage of:

3-WAY CONVERTIBILITY

This W-3 All-Purpose Loom may be run as:

1: A 4 x 1 box automatic bobbin-changing loom, *or*

2: A 4 x 4 box non-automatic loom, for pick-and-pick work where as many as 7 colors of filling may be called at will . . . *or*

3: A 4 x 2 box automatic bobbin-changing loom, for mixing filling a single pick at a time from 3 shuttles running in rotation. For fabrics with contrasting warp and filling, or other work where uneven appearance is hard to avoid.

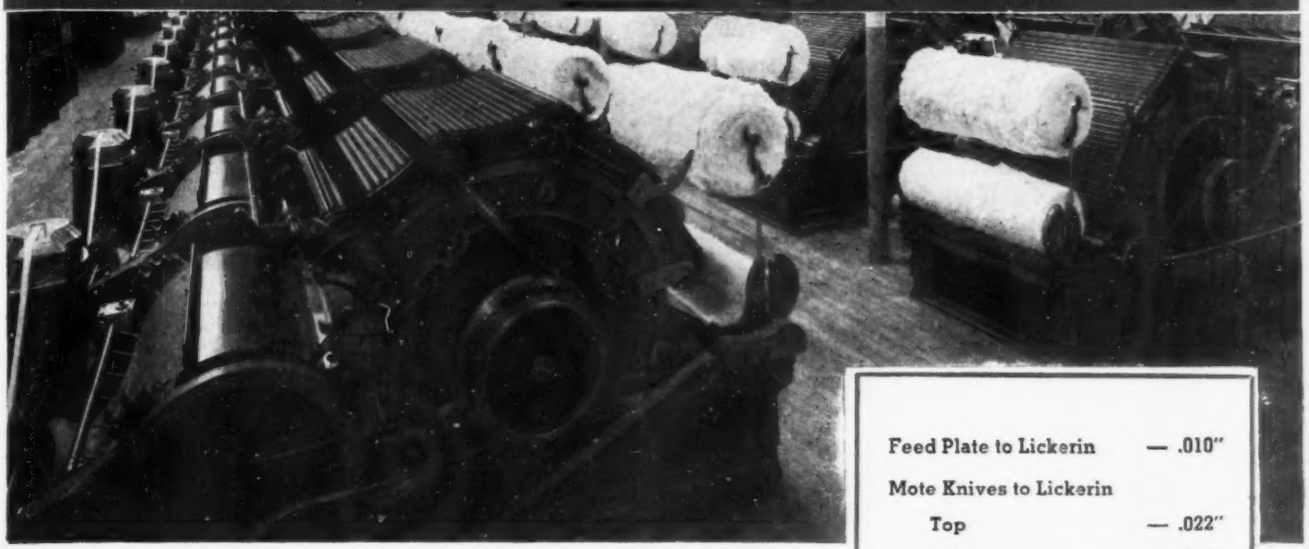
Conversion is quick and easy, from one to the others of these three forms of operation. So mills are now better able than ever before to meet swiftly changing market conditions. Write for full information, and watch this space for other exclusive advantages of the new C&K W-3 All-Purpose Looms.

CROMPTON & KNOWLES LOOM WORKS • Worcester 1, Mass.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics.

Will Your Cards *Run* to These Settings?



Feed Plate to Lickerin	— .010"
Mote Knives to Lickerin	
Top	— .022"
Bottom	— .017"
Screen to Lickerin	— .029"
Lickerin to Cylinder	— .007"
Flats to Cylinder	— .010"
Doffer to Cylinder	— .007"
Doffer Comb to Doffer	— .022"

SETTING a stationary card to these, or to your own standards, is one thing . . . **RUNNING** a card with these settings is something else.

- *Lickerins and cylinders cannot run true in worn bearings.*
- *Close settings, which mean good work, cannot be maintained with worn bearings.*
- *Cylinders cannot be properly ground when running in worn bearings.*
- *Close settings cannot be gauged at lickerin screens caked with grease and lint.*
- *Chattering combs cannot run closely and smoothly to the doffer.*

Southern States Ball and Roller Bearing Units on your cards make "Running to Gauge" possible — because the SKF bearings provide rigidity resulting in settings remaining the same whether the card is running or stationary.

Southern States Ball and Roller Bearing Units mean: an end to oil problems . . . oil-soaked clothing . . . caked screens . . . an end to dirty flats . . . excessive wear . . . shorter grinding time . . . simplified lubrication.

Install Southern States units at

LICKERIN • CYLINDER • COMB BOX
COMB STOCK OFF END

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Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

FIBERGLAS* YARNS GIVE DIMENSIONAL STABILITY

. . . won't shrink or stretch

If producing a fabric that won't lose its shape from excessive shrinking or stretching is one of your problems, investigate Fiberglas yarns. They are glass fibers and, being inorganic, resist moisture and high humidity.

With dimensional stability you will also get high tensile strength, resistance to oils and most acids, resistance to mildew and rot, electric non-conductivity and non-combustibility.

When you have a fabric problem that calls for any or all of these important properties, specify Fiberglas Yarns. For full information, ask Owens-Corning Fiberglas Corp., Textile Division, 16 E. 56th St., New York 22, N. Y.

RESISTANCE TO MILDEW & ROT

NONCOMBUSTIBILITY

RESISTANCE TO OILS & ACIDS

EXCELLENT ELECTRICAL PROPERTIES

HIGH TENSION STRENGTH

SPECIAL LABORATORY SERVICE. To co-operate with the technicians in your laboratory, Fiberglas maintains a Customer Service Laboratory and staff. They are at your disposal on a strictly confidential basis.

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OWENS-CORNING FIBERGLAS

*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

SANDOZ PRESENTS
the color achievement of the month

Vermont Tartan

...BY OLD BENNINGTON

For Peck & Peck, Old Bennington Weavers have created a group of striking new plaid tweeds, one of which—in gray, with overplaid of blue and yellow—is shown in the model's suit.

Serving a discriminating trade, these famed Vermont weavers use utmost discrimination in selecting *their* suppliers . . . among them, for dyes of trustworthiness, Sandoz.

Why is Sandoz so consistently an important source of colors for the "blue-ribbon" yarn producers, weavers, knitters, converters and independent dyers? Because of the confidence created by a succession of such Sandoz achievements as:

ALIZARINE LIGHT BROWN BL PAT.

It's a brown that is recognized throughout the woolen and worsted trade as the outstanding brown for light tan and camel hair shades. Its all-'round fastness makes it suitable for blending wool with *natural* camel hair. And it is also a favorite of auto fabric manufacturers who can depend on its fastness under mill processing and under the punishing service of an automobile's life.

For any chrome, acid or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

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SANDOZ *thinks ahead with textiles*

SANDOZ

THIS IS NO. 74 OF A SERIES ON

GETTING THE MOST FROM TWISTING

Information about twisting designed to show improvements in twisting equipment and new ideas in the twisting operation

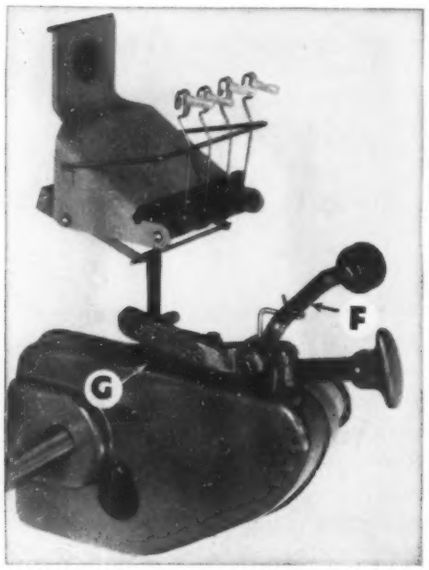

Fig. 1. Feed Roll Assembly.

NEW DEVELOPMENTS IN ATWOOD MODEL 10 RING TWISTER

Among the improvements that have been made in The Atwood Model 10 Ring Twister to increase efficiency are the following:

1. Feed Roll Assembly

Wear on the plunger cable has been reduced by means of an improved type of connection between the cable and the stud (A) on the intermediate gear lever. The Stakon clamp (B) which is now used, pivots on the stud when the plunger cable is in motion; this eliminates crimping of the cable at C and results in longer cable life.

Positive stopping action has been further insured by a redesign of the latch lever. This part is now bent over at the top and has a hole (D) to hold the trip wire in its proper operating position. Whenever an end breaks or a runout occurs, the trip wire falls directly between the latch knock-off cam and the feed roll latch lever, producing a positive stopping action.

To facilitate threading and tying knots in single ends, the eye in the feed roll thread guide (E) has been redesigned so that the yarn can be quickly and easily slipped into the thread guide. The auxiliary stop motion lever (F) has been given an oilless-bushed fibre roll positioned on the left-hand side of the feed roll housing. Both of these parts are attached to the feed roll housing by separate screws. In the rearrangement of parts, the operator has been given more freedom of hand movement while threading the yarn around the feed roll.

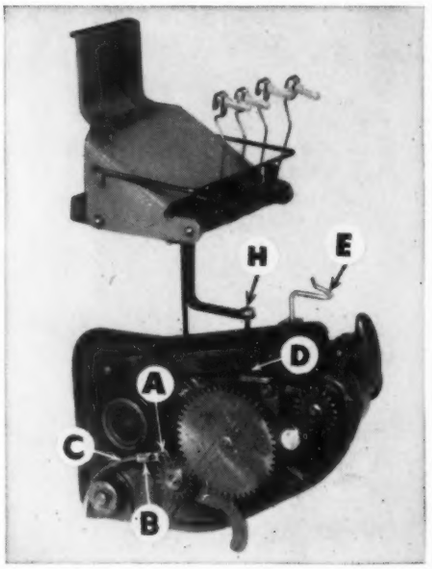

Fig. 2. Feed Roll Assembly with cover removed.

The knock-off motion has also been improved by making the trip wire connection from a metal stamping to provide a rigid mounting. A projection (G) contacts the feed roll housing when the trip wire has reached the contact point between the knock-off cam and the latch lever; this prevents the trip wire from dropping too far into the housing. The trip wire is screwed into the connection and is held firmly in place by the lock nut (H). A vertical adjustment of the trip wire can be made by loosening this nut and turning the wire in the connection.

2. Builder Lever Straight Bobbin Builder Motion

The design of the builder lever of the straight bobbin builder motion has been changed slightly to protect against any possibility of an excess of oil overflowing when the lever is depressed by the action of the cam.

The front wall has been altered so that it now tapers gradually downwards from both ends of the reservoir toward the center. The top of the wall at center is just slightly above the center of the cam roll. By keeping the oil level at the center of the cam roll, it becomes impossible to flood the reservoir to such an extent that the oil will overflow when the lever is depressed below the horizontal.

To help maintain the proper condition, the words, "Oil level to center of roll" are molded into the casting.

See pages on Universal and Atwood Machinery in TEXTILE CATALOGS AND DAVISON'S

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23-8-5

March 1949

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

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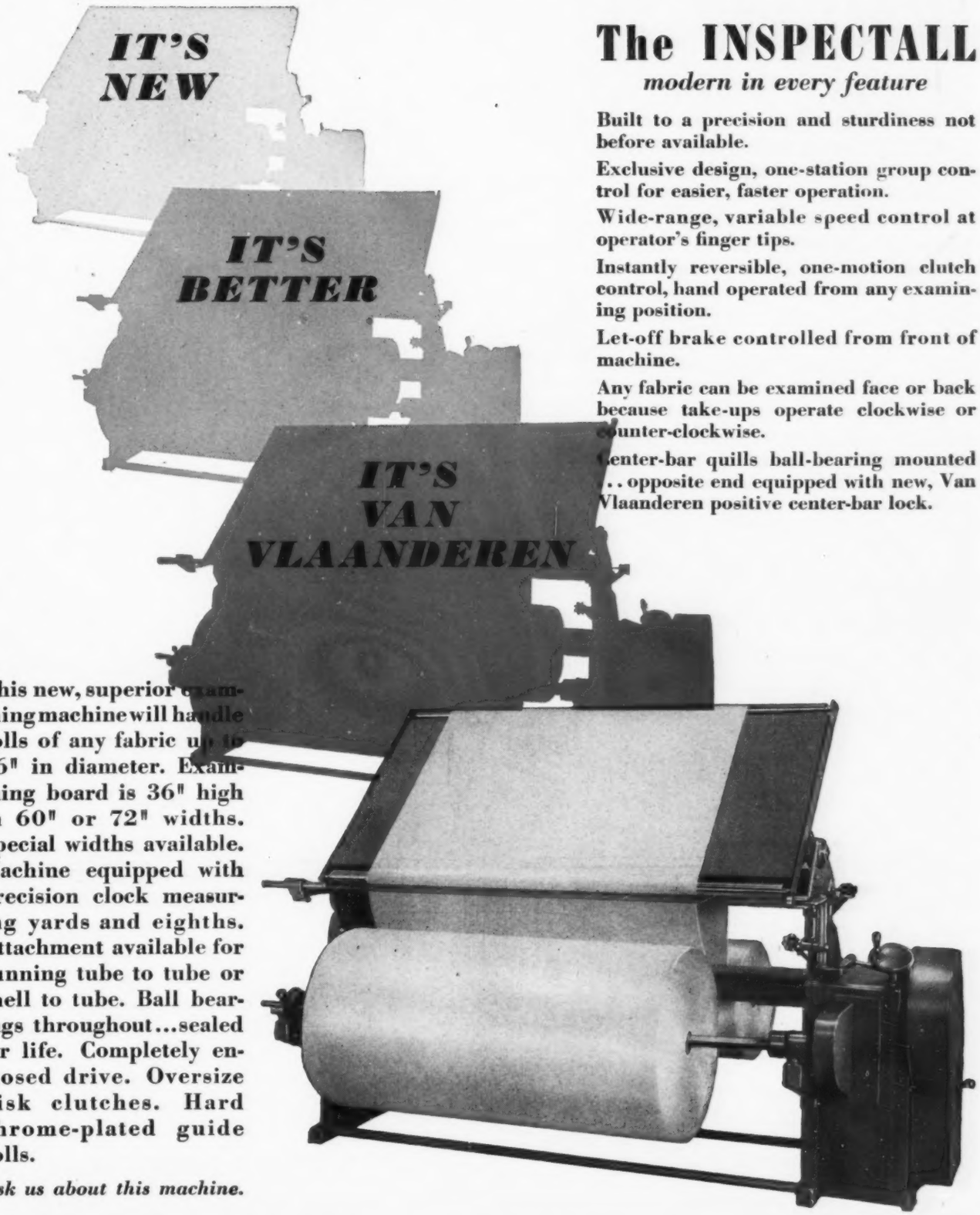

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Exclusive design, one-station group control for easier, faster operation.

Wide-range, variable speed control at operator's finger tips.

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This new, superior examining machine will handle rolls of any fabric up to 36" in diameter. Examining board is 36" high in 60" or 72" widths. Special widths available. Machine equipped with precision clock measuring yards and eighths. Attachment available for running tube to tube or shell to tube. Ball bearings throughout...sealed for life. Completely enclosed drive. Oversize disk clutches. Hard chrome-plated guide rolls.

Ask us about this machine.

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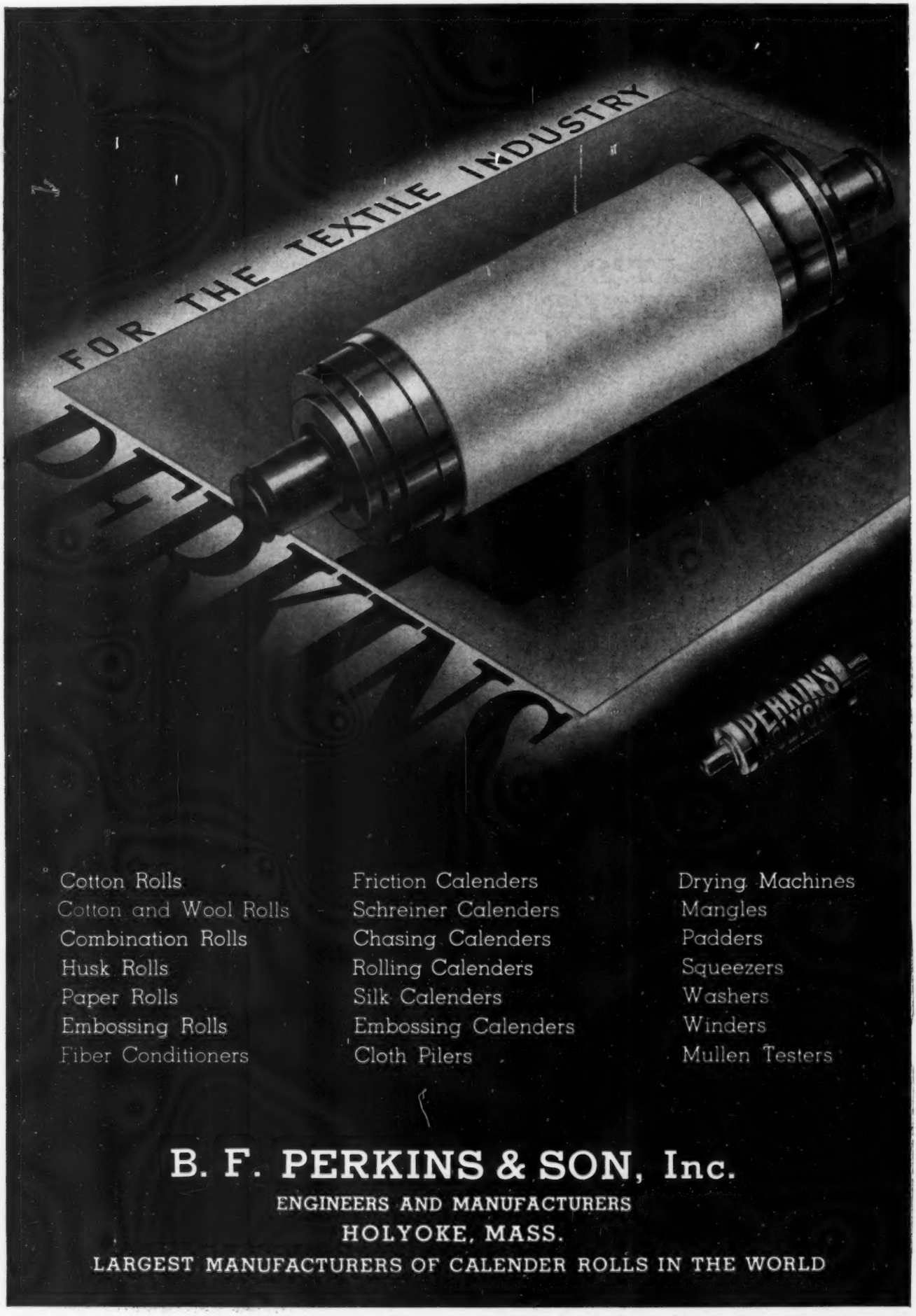

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LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

Grip the Sides of

ANY V-Belt...

FEEL the Sides CHANGE SHAPE

as the belt Bends –

–That SHOWS you Exactly WHY

THE CONCAVE SIDE

(U. S. PATENT NO. 1813698)

SAVES You MONEY

Bend any V-Belt and you can actually feel its sides change shape.

That's because the bending puts the top of the belt under *tension*, while the body undergoes *compression*. Naturally the sides of the belt *bulge out*—and if the belt is built with *straight sides*, you get the result shown in Figures 1 and 1-A, below:—

Straight-Sided V-Belt

How Straight-Sided V-Belt Bulges in Sheave-Groove.

Clearly, the bending forces a straight-sided V-Belt into a shape that does not fit the sheave-groove—and the bulging produces excessive wear along the *middle* of the *sides*.

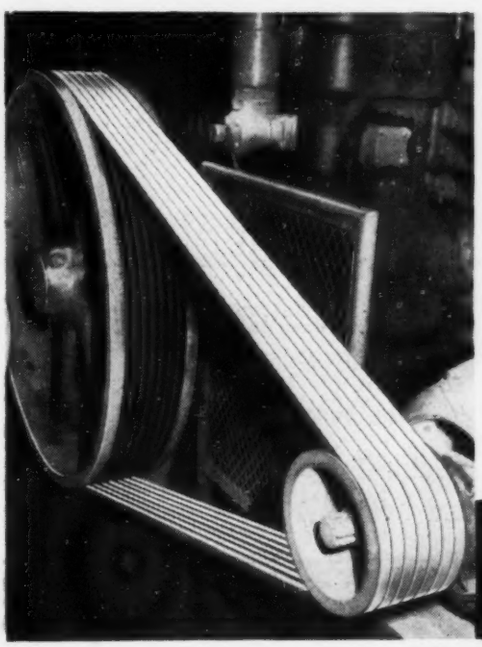
Now, bend the V-Belt built with the precisely engineered Concave Side (U. S. Patent No. 1813698)—the Gates Vulco Rope.

Gates Vulco Rope With Concave Side.

No Side Bulge. Precise Fit in Sheave-Groove.

You get the same shape change but *now* the new shape *exactly fits* the sheave-groove as shown in Figures 2 and 2-A.

Results—(1) *Uniform* side-wall wear; *longer* life. (2) *Full* sidewall grip on the pulley; carries heavier loads and sudden load increases without slippage — a big increase in drive efficiency — saving belt wear and also saving power!



The Concave Side is *MORE IMPORTANT NOW* Than Ever Before

Because the *sides* of a V-Belt are what actually *drive* the pulley, it is clear that any increased load on the belt means a heavier load that must be transmitted to the pulley *directly* through the belt's sidewalls.

Now that Gates *SPECIALIZED* Research has made available to you SUPER Vulco Ropes—carrying fully 40% higher horsepower ratings—the life-prolonging Concave Side naturally delivers greater savings today than ever before.

THE GATES RUBBER COMPANY
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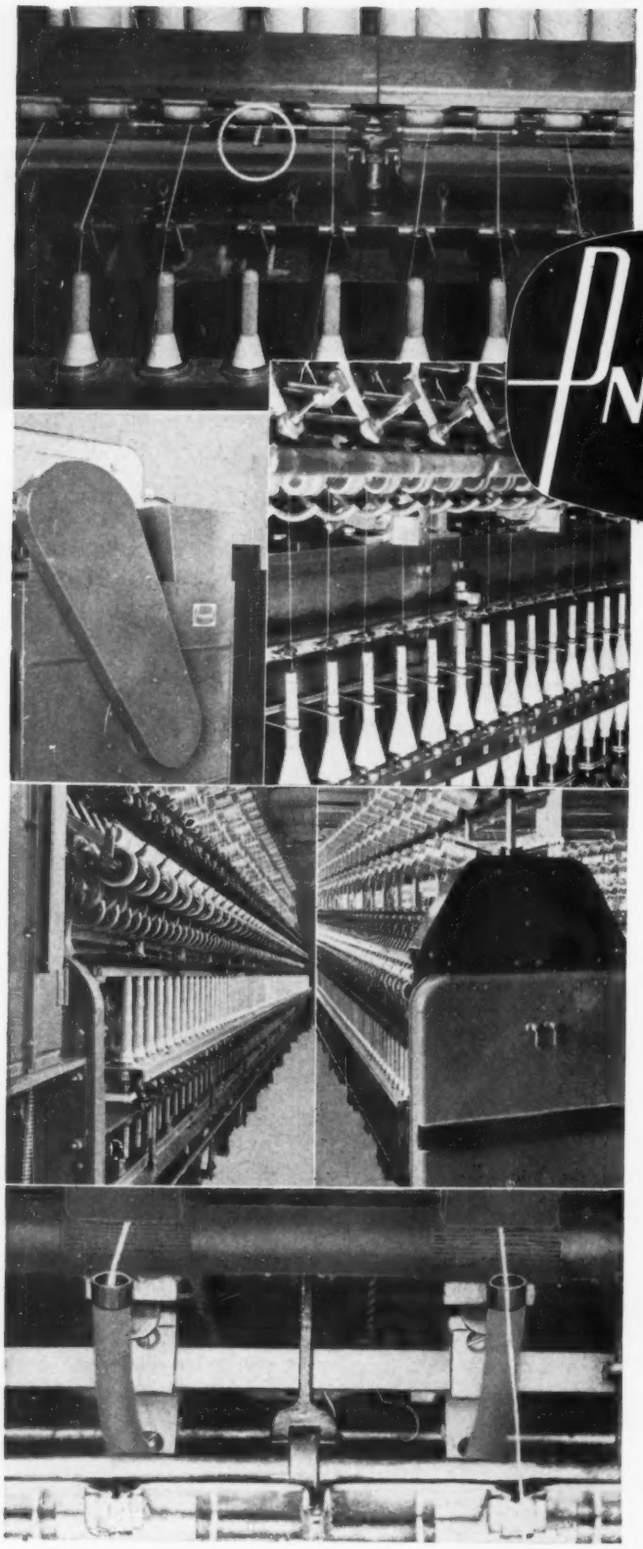

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the results:

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Less overhead per production unit
Reduced spinner training time

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Less slubs, gouts and end piecings
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No "wild" or flying ends

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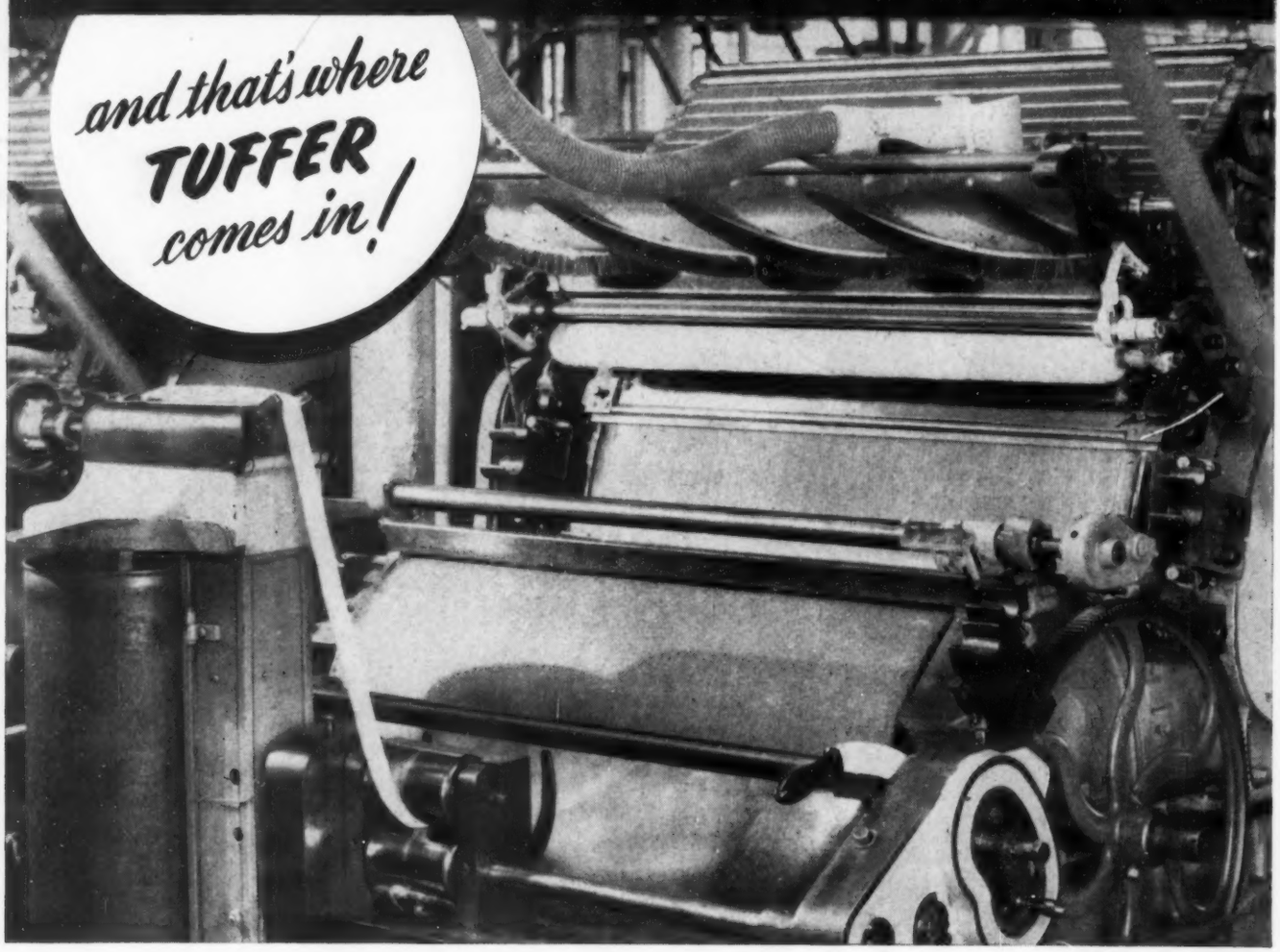
*Reg. U. S. Pat. Off.

Top Quality Clothing Cuts Your Carding Costs



THE quality of the material produced by your cards depends upon the quality of your clothing . . . that's why it's wise to use TUFFER!

The Tufferizing Process—developed and exclusively owned and used by Howard Bros.—cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires—tough, strong and of even temper—are formed with precision and placed with hairline accuracy in the famous Tuffer Foundation . . . when drawn on the cylinder they fit snugly—**points perfectly parallel and every one in place.**

For complete information ask our nearest representative or write to any Howard Bros. plant or office.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga. and Gastonia, N. C.
Branches: Philadelphia, Pa. and Blanca, Texas *Direct Representation in Canada* A-2

TUFFER CARD CLOTHING **IMPROVES PRODUCTION ALL ALONG THE LINE**

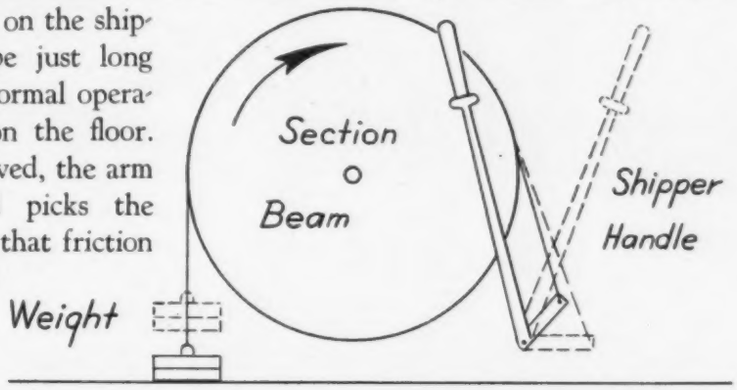
SLASHING HINTS

NO. 5 OF A SERIES

SECTION BEAM TENSION

Normally, the less tension on a warp being slashed, the better. Although some friction (and therefrom tension) must be applied to the section beams to prevent over-running when the slasher is stopped, there is one little trick that can minimize this.

Instead of fastening the anchor end of the friction rope to the floor, fasten it to a small arm welded on the shipper bar. Make the rope just long enough so that during normal operation, the weights rest on the floor. When the shipper is moved, the arm tightens the rope and picks the weights off the floor, so that friction is actually applied only when it is needed.



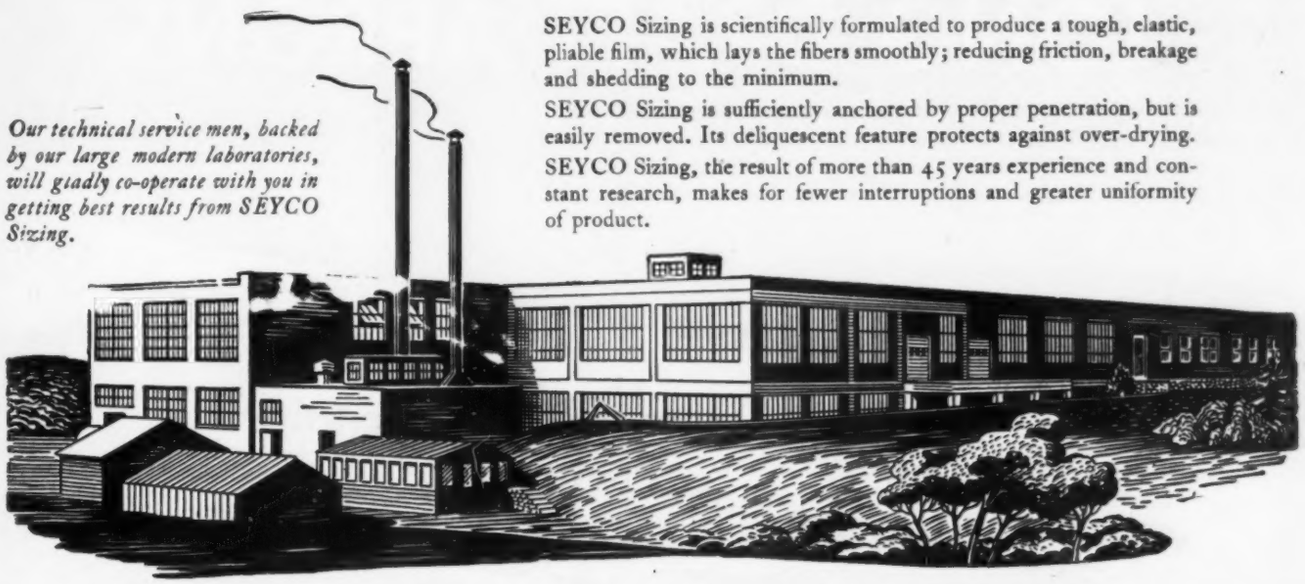
HEADQUARTERS FOR SIZE

Our technical service men, backed by our large modern laboratories, will gladly co-operate with you in getting best results from SEYCO Sizing.

SEYCO Sizing is scientifically formulated to produce a tough, elastic, pliable film, which lays the fibers smoothly; reducing friction, breakage and shedding to the minimum.

SEYCO Sizing is sufficiently anchored by proper penetration, but is easily removed. Its deliquescent feature protects against over-drying.

SEYCO Sizing, the result of more than 45 years experience and constant research, makes for fewer interruptions and greater uniformity of product.



SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

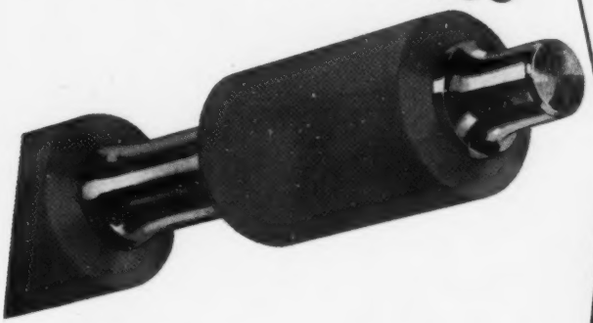
SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

For More Uniform Yarn · · Better Quality Yarn
USE
DAYCO
ROLL COVERINGS,
LONG DRAFT APRONS
Extra Durable Surface, Perfect Cushion,
and Exactly the Right Coefficient of Friction
Overseers are finding many spectacular advantages in using Dayco spinning room products. With live, resilient rubber compounds reinforced with tough fabric, Dayco engineers have perfected Roll Coverings and Aprons that have absolutely uniform thickness, and have exactly the right coefficient of friction. The long-lasting surface is not affected by heat, cold, oils, humidity, dyes or hard ends. Manufactured without laps or splices. Results—better, more uniform yarn.
Made by textile specialists in the heart of the textile industry (at Waynesville, North Carolina), Dayco Products are field-tested in nearby mills and textile engineering schools. Let Daycos prove their money-saving advantages on your frames. Write: The Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, South Carolina.

8 reasons why you should use

DAYCO ROLL COVERINGS



1. Reduce number of ends down. Minimize lapping up.
2. Permit changing of yarn numbers without rebuffing.
3. Equally efficient for natural and synthetic fibers and synthetic blends.
4. Static-free. Reduce eyebrowing.
5. Easy to apply. One-piece construction.
6. Oil-proof. Won't swell.
7. Not affected by humidity or temperature change.
8. No grooving. Long life.

Type "C" for revolving clearers.
Type "S" for flat clearers.

DAYCOS WIN COMPARISON TEST

In a North Carolina mill, Dayco Roll Coverings were tested against two other types of roll coverings for 1000 spindle hours. On ends down, the Daycos performed 27.7% better than one and 34.4% better than the other. Also, the Daycos had fewer lap ups.

MORE PROOF

In a South Carolina mill, running 20's warp rayon yarn, competitive tests were run for two days on new two-apron spinning frames with revolving top clearers. The frames using Dayco Roll Coverings had 35.8% fewer unclassified ends down than the frames using another type of roll covering. Also, the Daycos showed no grooving from hard ends, and no lap ups on the top rolls.

6 Reasons why you should standardize on Dayco

LONG DRAFT APRONS

1. Won't curl, split, crack, break, distort, stretch or groove.
2. Won't flip off. Won't pick up lint.
3. White drafting surface keeps yarn clean.
4. Will handle natural and synthetic fibers.
5. Nondirectional. Unaffected by hard ends.
6. Uniform thickness. No laps or splices. Smooth inside without ribs.

MORE DAYCO SPINNING ROOM PRODUCTS

Woolen and Worsted Cots. Give years of service. Insure more uniform spinning, with less matching-up.

Slasher Rolls. Insure more uniform sizing. Last longer. Not affected by starch.

Rub Aprons last longer. Stay put. Insure more uniform rubbing.

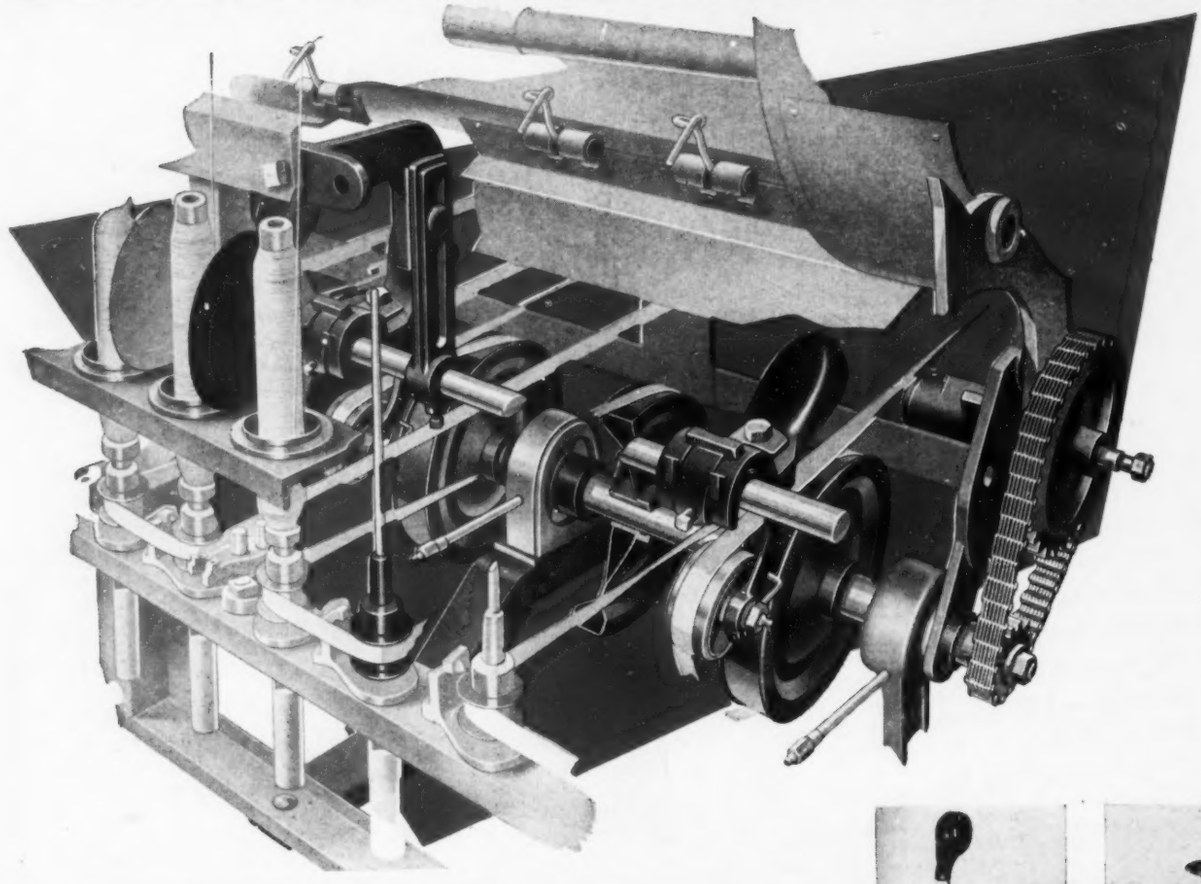
Condenser Tape. No stretch. Won't pick up lint. Less tendency to twist.

Sponge Cone Pads. Extra resiliency protects yarn.

Dayton Rubber

give your old frames that new look

with MEADOWS Conversions!



B-205

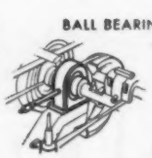
B-212-R-213

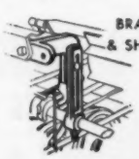
B-214-LA

B-216-LA

● The present cost of new frames, plus the natural desire to improve and utilize existing equipment, has prompted many mills to modernize their old frames, (either band-driven or old style tape-driven) with *Meadows Conversions* . . . Consisting of silent chain-drive; individual driving pulleys; high-strength ground and polished shafting (mounted on heavy duty ball bearings); ball bearing tape tension pulleys, and light weight solid aluminum alloy separators—a Meadows Conversion means less vibration, low power consumption, uniform speed and twist, fewer ends down, and *no more cylinder trouble!* . . . We engineer and service each installation, manufacture all parts, and will be glad to have our representatives survey and estimate your frames without obligation, in their respective territories. *More than 8 million spindles equipped with Meadows Ball Bearing Tension Pulleys.*

MEADOWS MODERNIZERS





MEADOWS MANUFACTURING COMPANY • ATLANTA, GEORGIA

Representatives: **JAMES P. COLEMAN, P.O. Box 1351, Greenville, South Carolina • WALTER S. COLEMAN, P.O. Box 722, Salisbury, North Carolina • MATTHEWS EQUIPMENT COMPANY, 93-A Broadway, Providence, Rhode Island • R. L. HOLLOWAY, Atlanta, Georgia**

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

"UNIFORM SIZE"

with Masoneilan Instruments on Size Cooking Kettles

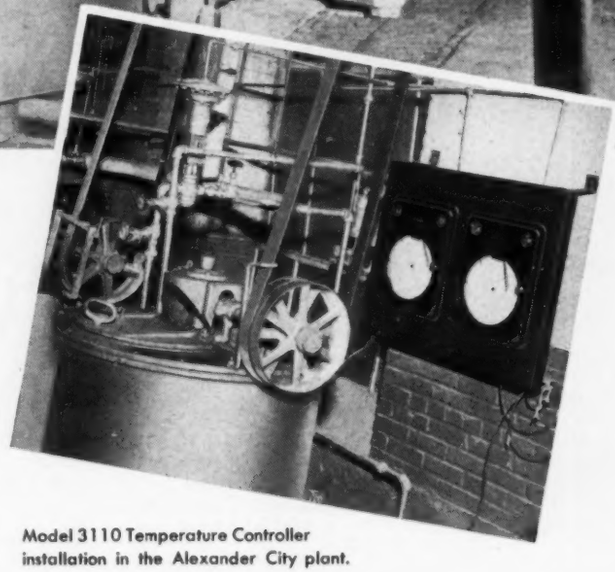
Masoneilan Temperature and Pressure Controllers and Control Valves in the Pell City plant

Avondale Mills uses Masoneilan Temperature and Pressure Controllers and Control Valves in its plants to assure uniformity of product.

In the Pell City mill, Time Cycle Cooking Temperature Controllers control ¾" No. 38 Control Valves. Steam pressure is 90 PSI. The operation is as follows—cooking schedule 70° to 180° in 20 minutes. Hold at 180° 10 minutes. 180° to 210° in 10 minutes. Hold at 210° for 20 minutes. Drop off and hold at 180° until size is used up.

Avondale Mills also uses other Masoneilan equipment such as pressure regulators, Exact-A-Load, and other control equipment.

You too, can maintain product quality and uniformity by using Masoneilan equipment in your mills. Write for information.



Model 3110 Temperature Controller installation in the Alexander City plant.

MASONEILAN

MASON-NEILAN
REGULATOR COMPANY

1211 ADAMS STREET, BOSTON 24, MASS.

Sales Offices or Distributors in the Following Cities
New York • Buffalo • Chicago • St. Louis • Philadelphia
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Mason-Neilan Regulator Co., Ltd., Montreal and Toronto

How NOPCO* FUA

cuts your wool processing costs

3% **OF NOPCO FUA**

applied to stock is all you need—3 lbs. NOPCO FUA per 100 lbs. wool—as against

8% **OF CONVENTIONAL WOOL OILS**

This tremendous differential is only one of the reasons why this initially *higher priced* product is proving the *most economical* of all wool oils in actual performance. Other reasons are

100% **ELIMINATION OF SOAP**

NOPCO FUA *eliminates the need for all soaps and detergents* in fulling and scouring. It also stops static completely during carding. It does not rust or corrode. NOPCO FUA is anhydrous, all fatty, contains no mineral oil or hydrocarbons—is salt free and ash free.

What these percentages mean to YOU

They mean . . . increased production quality and volume, valuable savings of time and equipment, reduced cost of *all* operations. Try NOPCO FUA in your mill. Give your woolens the benefit of its many exclusive advantages, its unparalleled versatility.

NOPCO — EVOLVED THRU RESEARCH

SEND FOR NOPCO FUA TECHNICAL BULLETIN

Mail coupon today and get *all* the facts about NOPCO FUA's versatile aid to better wool processing.

NOPCO CHEMICAL COMPANY. Harrison, New Jersey

Formerly National Oil Products Company

BRANCHES: BOSTON • CHICAGO • CEDARTOWN, GA. • RICHMOND, CALIF

*Reg. U. S. Pat. Off.

NOPCO FUA

SELF-FULLING SELF-SCOURING WOOL OIL

MAIL TODAY

NOPCO CHEMICAL COMPANY
Harrison, New Jersey (Dept. 23)

Please send, without obligation, your NOPCO FUA Technical Bulletin.

FIRM NAME_____

STREET ADDRESS_____

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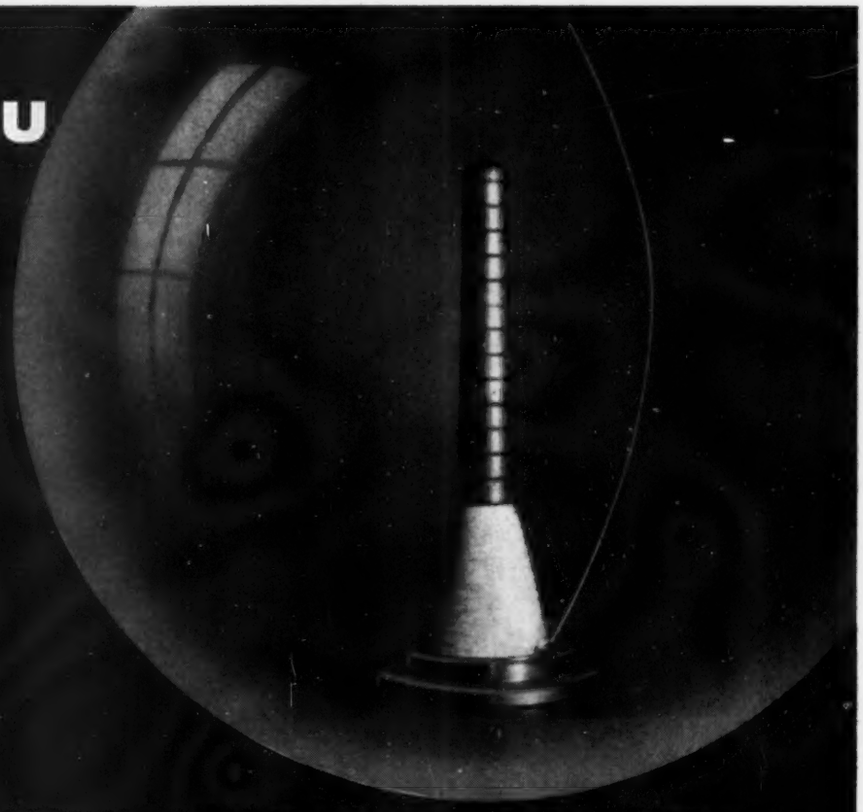
SENDER'S NAME_____

Have you ever seen this?



YOU definitely have not seen this happen . . . unless you have a STROBOTAC. This is a single-flash picture of a spindle turning at 10,400 rpm. With the STROBOTAC you see exactly this. The importance to you? Not the 10,400 rpm, but the fact that you can turn the STROBOTAC "speed" knob until one spindle appears to stand *absolutely still*, and then go right down the line and immediately see whether the others are still, too. If not, they are not all revolving at the same speed . . . and you know how important that is!

Type 631-B STROBOTAC
$125.00

Many mills use the STROBOTAC. Some of them even equip it with an extra long line cord so that a person can go right down the line of spindles at regular intervals to be SURE that the spindle speeds are the same.

Anyone can learn to use the STROBOTAC with a few minutes of practice. It is self-contained (except for the cord which plugs into any 110-volt 60-cycle a-c line), light in weight, and will show the speed of ANY revolving or reciprocating motion from 600 to 100,000 rpm!

We'd like to tell you more.

WRITE FOR "EYES FOR INDUSTRY"

GENERAL RADIO COMPANY

Cambridge 39, Massachusetts

NEW YORK CHICAGO LOS ANGELES

FOR COTTONS, RAYONS, MIXED GOODS

RAPIDASE saves you money because

1—It de-sizes efficiently at high speeds.

This fast-acting enzyme is particularly adaptable for high-speed continuous de-sizing ranges, shorter time in the box or fewer ends on the jig.

2—It is effective in low concentrations.

This concentrated product can be used advantageously in concentrations as low as one tenth of 1%.

3—High temperatures can be used to increase its activity.

The starch-solubilizing action of Rapidase is doubled with each 18° rise in temperature between 120° and 200° F, permitting advantage to be taken of the increased penetration and easier removal of the decomposition products at the higher temperatures.

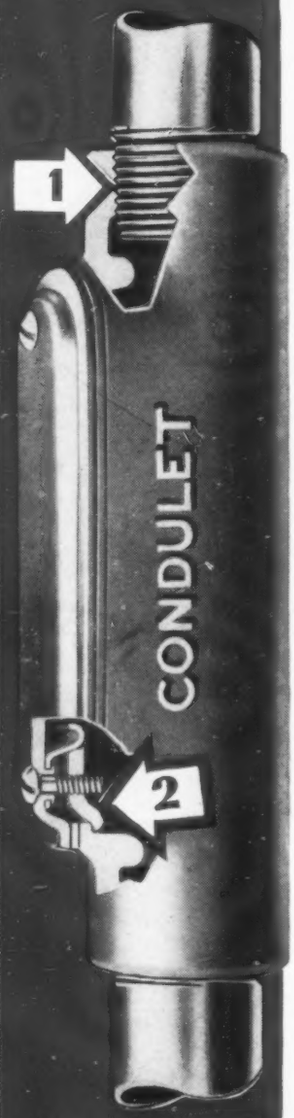
RAPIDASE
for de-sizing®

TECHNICIANS AVAILABLE • WRITE FOR BOOKLET

WALLERSTEIN COMPANY, INC. 180 MADISON AVENUE, NEW YORK 16, N. Y.

Quik Quiz on CONDULETS

Questions and answers
regarding the backbone of
an electrical wiring installation



Type C
Obround Condulet
Broken-away view showing (1) tapered threads, and (2) the Wedgenut fastener

Question. When were CONDULETS first made?

Answer. In 1906 Crouse-Hinds Company introduced CONDULETS to the electrical wiring industry. CONDULETS represented an entirely new idea in conduit outlets, totally unlike the outlet boxes and fittings previously made. CONDULETS were destined to revolutionize electrical conduit installation practice.

Q. How did the word "CONDULET" originate?

A. Crouse-Hinds new conduit outlets needed a name so the word "CONDULET" was coined, a contraction of "conduit" and "outlet." It is registered in the U. S. Patent Office and designates a product made only by the Crouse-Hinds Company.

Q. What were the advantages of CONDULETS over previous outlets?

A. The older outlets were both unhandy and unsightly, while the new cast CONDULETS were streamlined, compact outlets that were handy to install and produced a neat appearing job. The oblong body with round ends suggested the name "Obround", which was applied to the first series of CONDULETS.

Q. Were they like the present Obround CONDULET?

A. There have been important refinements, but the basic design remains the same. The most notable improvement was the Crouse-Hinds Wedgenut fastener which provides a handy way to firmly attach the covers.

Q. How many types are now in the Obround Series?

A. Forty-nine types. Sizes to fit ⅛" to 6" conduits, with a wide selection of interchangeable covers and wiring devices.

Q. What other CONDULETS have been added to the line?

A. Obround CONDULETS were so well received by the electrical trade that a variety of other types followed in rapid succession. In fact, the CONDULET line has grown far beyond the original concept and now includes, besides the items needed for the usual conduit installations, a complete line of explosion-proof and dust-tight CONDULETS for use in industries where explosive gases or dust require special electrical safeguards.

Q. Why are all the threads in CONDULET hubs taper tapped?

A. Because all conduit threads are tapered and it makes an imperfect job if a tapered thread is screwed into a straight threaded hole. When using CONDULETS, the threads on the conduit firmly engage every thread in the hub, because both are tapered. This makes a rigid joint which will not loosen under vibration and also assures permanent ground continuity. Taper tapping is an important Crouse-Hinds feature.

Q. What about CONDULET quality?

A. CONDULETS have always been noted for the highest quality. They are scientifically designed in Crouse-Hinds Engineering Department and carefully manufactured in a modern factory by skilled craftsmen from the finest material obtainable. Crouse-Hinds operates four separate laboratories where trained technicians assist in the development of new products and maintain a constant control over the quality of CONDULETS.

Q. How many CONDULETS are there today?

A. More than 15,000 items constitute the present CONDULET line. Conduit installations in all parts of the world are equipped with CONDULETS.

Q. WHERE CAN I BUY CONDULETS?

A. From the beginning it has been the Crouse-Hinds policy to have . . . **A Nationwide Distribution through Electrical Wholesalers.** There is one near you.

CONDULETS
FLOODLIGHTS
TRAFFIC SIGNALS
AIRPORT LIGHTING

CROUSE-HINDS COMPANY
Syracuse 1, N. Y.

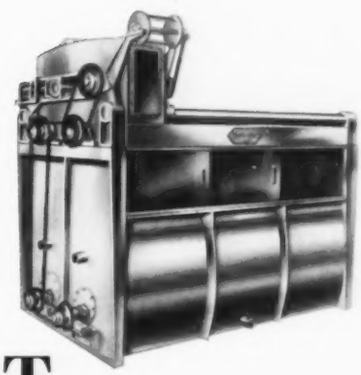
Offices: Birmingham — Boston — Buffalo — Chicago — Cincinnati — Cleveland — Dallas — Denver — Detroit Houston — Indianapolis — Kansas City — Los Angeles — Milwaukee — Minneapolis — New York Philadelphia — Pittsburgh — Portland, Ore. — San Francisco — Seattle — St. Louis — Washington.
Resident Representatives: Albany — Atlanta — Baltimore — Charlotte — New Orleans — Richmond, Va.
CROUSE-HINDS COMPANY OF CANADA, LTD. *Main Office and Plant:* TORONTO, ONT

A Nationwide Distribution Through Electrical Wholesalers

One of a series painted for Rodney Hunt by Ben Stephenson

FAMOUS FINISHES . . *The Nova Scotian fishing schooner "Bluenose" wins the last of the famous International Fishermen's Races sailed off Gloucester in October 1938. Here the "Bluenose" is shown crossing the finish line a scant half mile ahead of her American rival the "Gertrude L. Thebaud."*

AND speaking of famous finishes, Dan River Mills, Inc., are famous for finishes, too. In their case — it's cottons and rayons. Dan River Mills were one of the first to install the new Rodney Hunt "Tensitrol" Washers, and are now setting new records for quality finishing at low production costs. By the way, have *you* the complete story on "Tensitrol"? It has proved to be the biggest news in finishing equipment in many a year. You are invited to turn the page for more specific information about "Finishing For Profit."



RODNEY HUNT

RODNEY HUNT

Established 1840

ORANGE 10, MASSACHUSETTS, U. S. A.

"Tensitrol," "Tru-Shade," "Slack Loop," "Wring-Master," and "Curve-of-Strength" are registered trade marks identifying textile finishing machinery manufactured exclusively by Rodney Hunt Machine Co.

Finishing For Profit

RODNEY HUNT

Established 1840

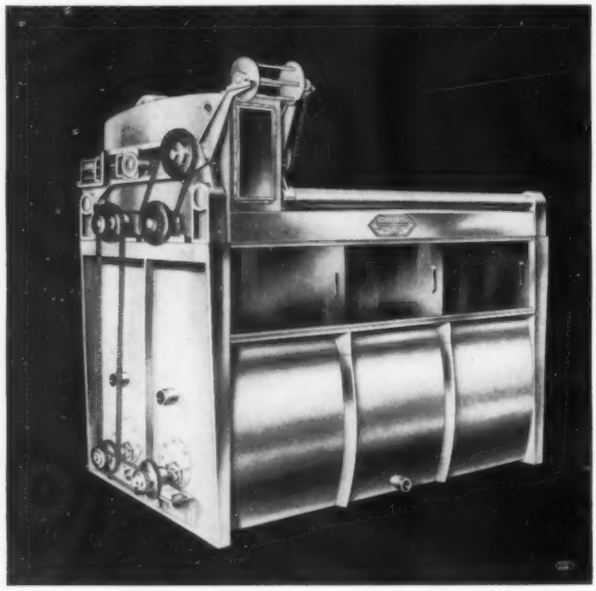
RODNEY HUNT MACHINE CO.

ORANGE 10, MASSACHUSETTS, U.S.A.

Poplins at 200 Yards per Minute in "Tensitrol" Rope Washers

EVERYONE was on edge. Both machines had been built by experienced men from reputable firms. Both were of gleaming stainless steel. Outwardly, the principal difference lay in the curved, strong-ribbed sides of one of the machines. Inwardly, it was the revolutionary design principle of this machine that created the air of tenseness.

Both machines were undergoing the same tests. At stake was more than a large commercial order; if the new design proved itself, it would answer a problem that had beset the textile industry since the beginning of time; it



would mean a giant stride toward quality finishing at sharply reduced cost.

More than 85,000 yards of fabrics were put through each of the washers — 48 miles of poplins, sheetings, dress goods, and other fabrics divided into 32 lots. When the results were scored, Rodney Hunt's new and revolutionary "Tensitrol" Rope Washer had:

1. Established a new peak in washing efficiency.
2. Proved that tensionless operation at that efficiency was possible for the first time in history.
3. Reduced horsepower requirements sharply.
4. Cut water consumption by more than 60%.

But, among the tests was one of *paramount importance to producers and finishers of poplins.* It involved the washing of heavier poplins, which had previously been done in open width form because of the almost certain development of rope marks.

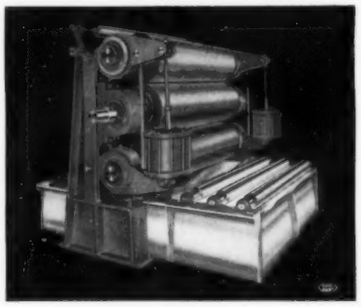
The completely tensionless operation of the "Tensitrol" Open Width Washer, together with the absence of nip rolls, has for the first time assured satisfactory processing of poplins. To be specific, caustic saturated poplins are being run at over 200 yards a minute on this machine and are being washed caustic free with a water consumption of 40 gallons a minute.

★ ★ ★

For Mercerizing At High Speeds

THE fifteen-ton Type RH Three Roll Saturator shown here is used in one of the highest speed mercerizing ranges on caustic impregnation in the country.

This patented saturating unit, complete with a stainless steel tank, has found widespread use for open width work in bleaching, mercerizing, and resin application throughout the country.



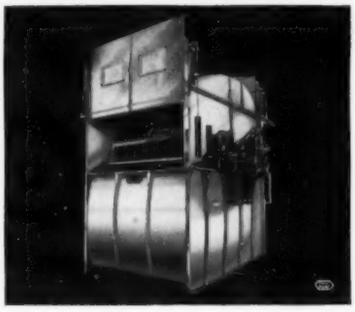
One of the famous "Wring-Master" line, the rolls automatically separate when air pressure is released. Instant and absolute control of pressures is assured.

"Wring-Master" Padders are readily available for all types of fabrics, for 'round-the-clock production or for experimental work.

★ ★ ★

Black to Pastels in Five Minutes

A simple hosing of this Combination Washer and Dye Kettle in use in a Rhode Island plant cleans the stainless steel in five minutes. A quick changeover from black to pastels, as an example, is a routine matter.



Hundreds of these Rodney Hunt machines, all with the patented "Curve-of-Strength" tub construction that prevents flexing while being emptied or filled, are in use throughout the world.

Compact and complete, they will take woolens or worsteds from a fulling mill, for example, rinse, wash, dye, rinse, speck dye, and rinse again, all without removing the material from the machine.

One of the most flexible machines in a woolen or worsted plant—this Combination Washer and Dye Kettle can serve exclusively as either a top efficiency stainless steel dye kettle, a stainless steel dolly washer, or as both combined.

★ ★ ★

If further information is desired on the above subjects, please address your inquiries to the Rodney Hunt Machine Co., Orange 10, Massachusetts, U.S.A.

COPYRIGHT 1949 RODNEY HUNT MACHINE CO.

Will it look well in the rain?

Rainwear must repel rain, but the rainwear that sells *first* is the fabric that's sleek, smart and fashionable. This Celanese-rayon fabric is a fashion-first because of its excellent water repellency, draping quality, softness and color. To make it a buyer's choice, both chemist and dyer worked side by side in selecting and applying proper dyes and water repellent finishes.

If draping quality, water repellency and color fastness are causing you difficulties, find out about Amalgamated products and services.

Products of Amalgamated Chemical Corporation include Dyeing Assistants, Fabric Finishes, Scouring Agents and Hosiery Finishes. Amalgamated Field Representatives, experienced technical men, are ready to assist you with any textile chemical problem. Also complete facilities of a modern research and production laboratory are available to you. Build bigger profits through better fabrics. Write, wire or call Amalgamated.

AMALGAMATED CHEMICAL CORP., Phila. 34, Pa.
Southern Division: 1819 Spring Garden Street, Greensboro, N. C.

Amalgamated

One of a series *of messages to help you increase your understanding of business paper advertising, and its effect on your job.*

Advertising is your boy!

SOME COMPANIES think nothing of investing hundreds of thousands of dollars in new machinery, in order to trim a few cents off their manufacturing cost per unit. Yet these same companies often waste such savings in costly selling methods — by expecting their *salesmen* to beat the brush for new prospects.

That's not what salesmen are for. Their time is too valuable. And it just isn't good business to send a *man* to do a boy's work. Not when you can use advertising as your "boy" — to do the same job faster, more efficiently, and a whole lot cheaper! For instance —

It costs about $10,000 a year, on the average, to put one good salesman into the field. Assuming that he can make about 750 calls a year, you get an average cost of something over $13 per call. That's not too high if your salesman can concentrate on *actual prospects*. But it's entirely too much to spend on "missionary calls" — especially when you consider that for the same $13 (and usually much less) advertising can make well over a *thousand* such calls on the readers of magazines like this!

Did we say *boy?* Actually, advertising works more like a machine. For by mechanizing part of the selling process, it reduces your cost of *manufacturing a sale*. Just consider the five basic steps required:

1. **Seeking out prospects**
2. **Arousing their interest**
3. **Creating a preference for your product**
4. **Making a specific proposal**
5. **Closing the order**

Advertising performs the first three of these steps. It leaves your salesmen free to concentrate on the last two — which they alone can do, and do best.

Nothing you invest in will go so far toward reducing your cost of manufacturing a sale. And nowhere will this investment yield a higher return than in the business press, where your advertising calls on the greatest possible number of interested prospects, at the lowest possible cost.

TEXTILE INDUSTRIES

is a member of The Associated Business Papers who are sponsoring this campaign. If you'd like reprints of this advertisement (or the entire series) to pass along to others in your organization, we'll be glad to mail them to you, together with a copy of an interesting folder entitled, "How Much Does NO Advertising Cost."

BARBER-COLMAN

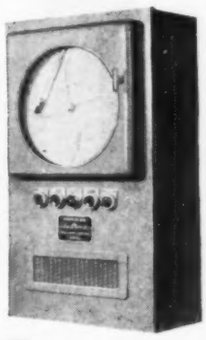
COMPLETE, AUTOMATIC

Slasher Room Controls

INCREASE SLASHER PRODUCTION

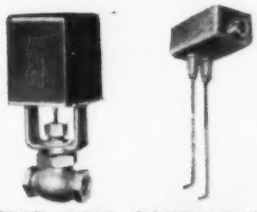
IMPROVE WEAVE ROOM EFFICIENCY

When considering *self-liquidating* improvements in a textile mill, no mill executive should overlook the slasher room. Modern automatic control equipment installed on existing machines costs relatively little and can pay for itself in a short time. Barber-Colman Complete Slasher Room Controls include: (1) TEMCHRON Size Cooking Controller that assures uniformity of batches through automatic control of warm-up time, cooking time and temperature, and holding temperature; (2) Automatic temperature control for size storage kettles; (3) Temperature controls and level controls for the size box, to provide constantly uniform condition of the size being used; and (4) Automatic *Electronic* MOISTURE CONTENT CONTROLLER that constantly regulates the speed of the slasher to compensate for all variables, and assures the delivery of warps with uniform and optimum moisture content. The effect of these controls is a considerable increase in slasher production and a noticeable improvement in weave room efficiency through improved warps as shown by the typical results reported below. Consult your Barber-Colman representative concerning possible improvements and savings in *your* mill — his advice and recommendations are available without obligation.



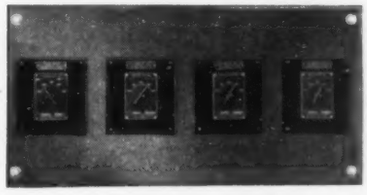
Electronic MOISTURE CONTENT CONTROLLER

An *all-electronic* instrument that controls slasher speed constantly to compensate for all variables and to produce warps of uniform and optimum moisture content.



SIZE BOX CONTROLS

Two functions are performed — maintenance of uniform size temperature and maintenance of proper size level in the box.



CYLINDER TEMPERATURE CONTROLS

Essentially, these are motor-operated valves on the steam supply line governed by thermostats in each cylinder, with any desired indicating or recording accessories.

TEMCHRON SIZE COOKING CONTROL

Assures uniformity of size from batch to batch by automatic control of warm-up time, cooking time and temperature, and holding temperature. Fully adjustable.

TYPICAL RESULTS OF INSTALLING BARBER-COLMAN SLASHER CONTROLS

A South Carolina mill, slashing 19s cotton warp for ticking, secured a slasher production increase of over 30%. Weave room efficiency was increased 2.0% and there was an improvement in quality of goods.

Another South Carolina mill, weaving print goods from 30s yarn, increased slasher production by 20% even though steam pressure on the cylinders was reduced from 10-12 psi to 1-3 psi.

A North Carolina mill, weaving sheeting from 20s yarn, found slasher production was increased by 25% and weave room efficiency by 1.5%.

Another North Carolina mill, weaving fancy striped shirtings from 40s yarn, did not try to increase slasher production because of an established yarn inspection and repair operation, but did obtain sufficient benefits from quality improvement, increased weave room efficiency, and better tying-in to justify the investment.

Six New England and Canadian mills report increases in slasher speed ranging from 15% to 50%. Another New England mill actually increased speed by 100%, but the yarn was previously very much overdried.

Write for Literature

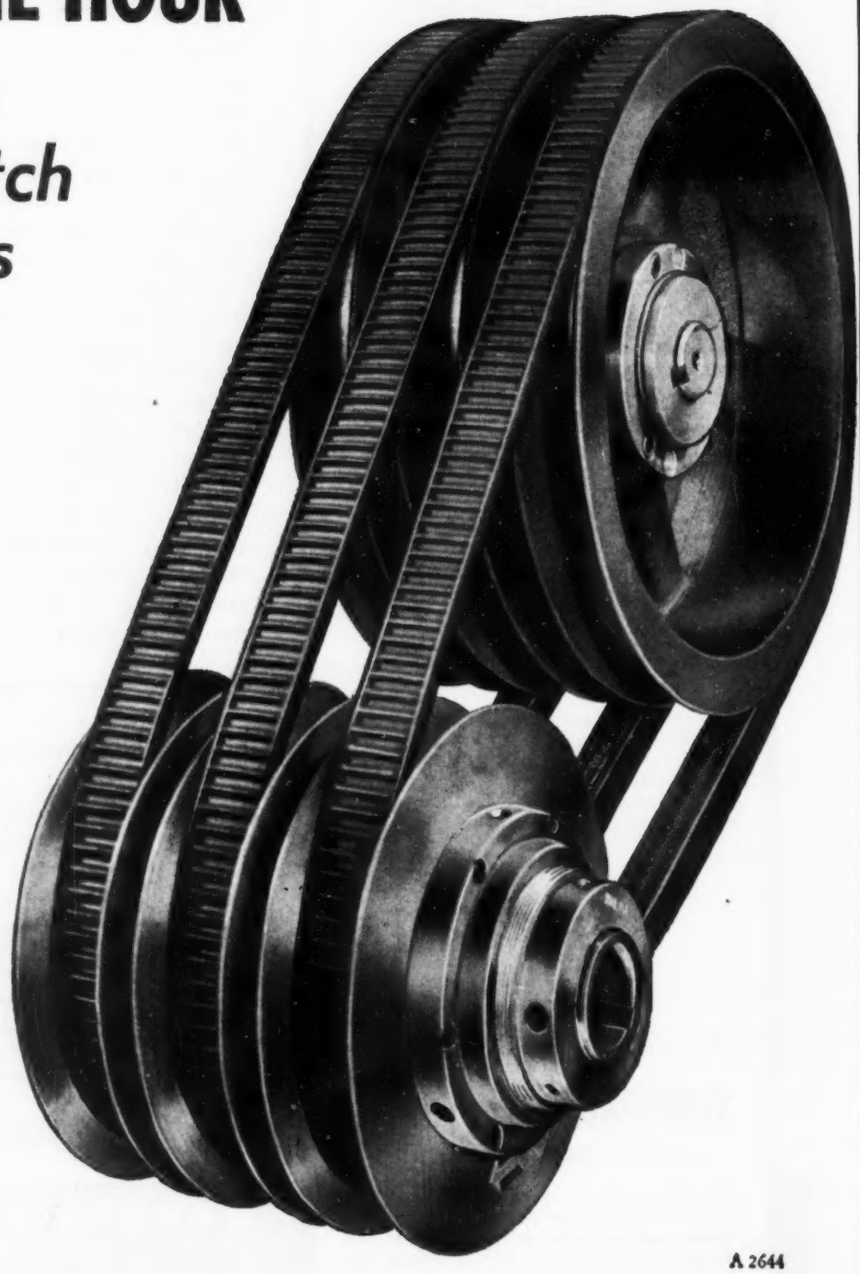
BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS

BOSTON, MASS. • GREENVILLE, S. C. • GREENSBORO, N. C.

3 Ways to Cut

1. PRODUCE MORE PER MACHINE HOUR

with
Vari-Pitch
Drives



QUICK EASY SPEED CHANGES and accurate speed control will give you more production, reduce your unit costs. The simplest method of speed control is Vari-Pitch Drive. Simple, rugged, clean, quiet — these drives give you the speed control you need at lower cost than any other way. Three types cover all applications.

STATIONARY CONTROL — Most widely used and lowest cost speed control. Change speeds in 5 to 8 minutes. Speed range of 50% to 100%.

MOTION CONTROL — Changes speed instantly *while machine is running*. Same 50% to 100% speed range. Greatest saving where speed changes are frequent.

SPEED CHANGERS — Fully enclosed multiple V-belt drive with special sheaves giving 375% speed range. Single handwheel adjusts *while running*.

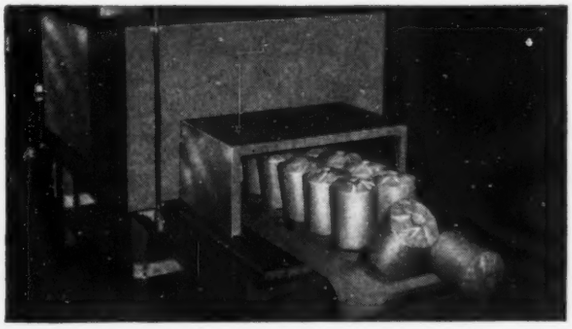
You can figure the saving in dollars and cents with the help of your Allis-Chalmers Authorized Dealer or District Office representative. He will help you analyze your operations and show you time and cost savings in your own production setup. Consult an Allis-Chalmers drive expert today. Also listed in Sweet's.

A 2644

Texrope, Vari-Pitch and *Quick Clean* are Allis-Chalmers trademarks.

Costs FOR TEXTILE MEN!

2. SPEED HEATING AND DRYING *with Allis-Chalmers Dielectric Heaters*



DIELECTRIC HEATING has resulted in outstanding production records in many textile mills. Its chief advantages are: Increased speed, which smooths out production sequences and reduces stock in process. . . . Close heat control, which improves product quality greatly. . . . Even heating throughout, which improves product uniformity. *Allis-Chalmers Dielectric Heaters produce results that cannot be duplicated by any other process.*

Typical Examples: Drying reduced from days to minutes. Shrinkage variation below 0.4%. Twist set in minutes with definite improvement in tensile strength.

Go over your production methods with an Allis-Chalmers dielectric heating expert. He can tell you if your operations can be improved by this new method. He will show you cost figures based on your operations. You can't afford to miss this opportunity. Contact your A-C District Office or write direct today.

3. REDUCE MAINTENANCE COST *with Allis-Chalmers Textile Motors*

QUICK-CLEAN MOTORS

Less down-time for cleaning because large fans produce a greater volume of air and keep lint moving through unrestricted air passages. There is no place for dirt to lodge. Bearings are sealed — they may be operated five years without attention. Grease does not leak out. Available from 2 HP at 1200 rpm to 15 HP at 1800 rpm. Some in stock, others on quick delivery.

LOOM MOTORS

Totally enclosed, non-ventilated type. They have all of the operating characteristics required for efficient loom drive: high maximum torque . . . smooth power under rapidly changing load . . . extra overload capacity for breaking-in operation.

In addition, these motors have construction features necessary for long life and minimum maintenance. Anti-friction bearings . . . die-cast rotor, accurately turned and balanced . . . "Formvar" copper wound stator, twice dipped in insulating varnish and oven-dried.

Immediate delivery on ¾ and 1 horsepower ratings.

ALLIS-CHALMERS, 1054A SO. 70 ST.
MILWAUKEE, WIS.

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

For a stabilized starch of Uniform Viscosity

VANESTA

Addition of VANESTA to starch dispersion* before cooking prevents abnormal thickening and results in a starch giving . . .

UNIFORM SIZES

Non foaming.
Good adhesion.
No mark-off.

SHARP PRINTS

High cold flow.
Stabilized viscosity.

SMOOTH BACK FILLING

Non foaming.
Stabilized viscosity.
Good film forming properties.

* *Addition of VANCIDE will keep starch indefinitely, preventing mold and souring.*

R. T. VANDERBILT CO. INC.

230 Park Avenue, New York 17, N. Y.

3 REASONS WHY

Taylor should control your slasher

BELOW you see the Taylor-controlled Cocker slasher at Laurens Mills, Laurens, South Carolina. On the basis of its fine performance, here are just three out of many good reasons why Taylor Automatic Slasher Control can save *you* money and increase *your* production.

1. The Taylor Control System measures and controls *by the condensate temperature.* This assures the closest possible relationship to the actual skin (face-of-slasher-drum) temperature.

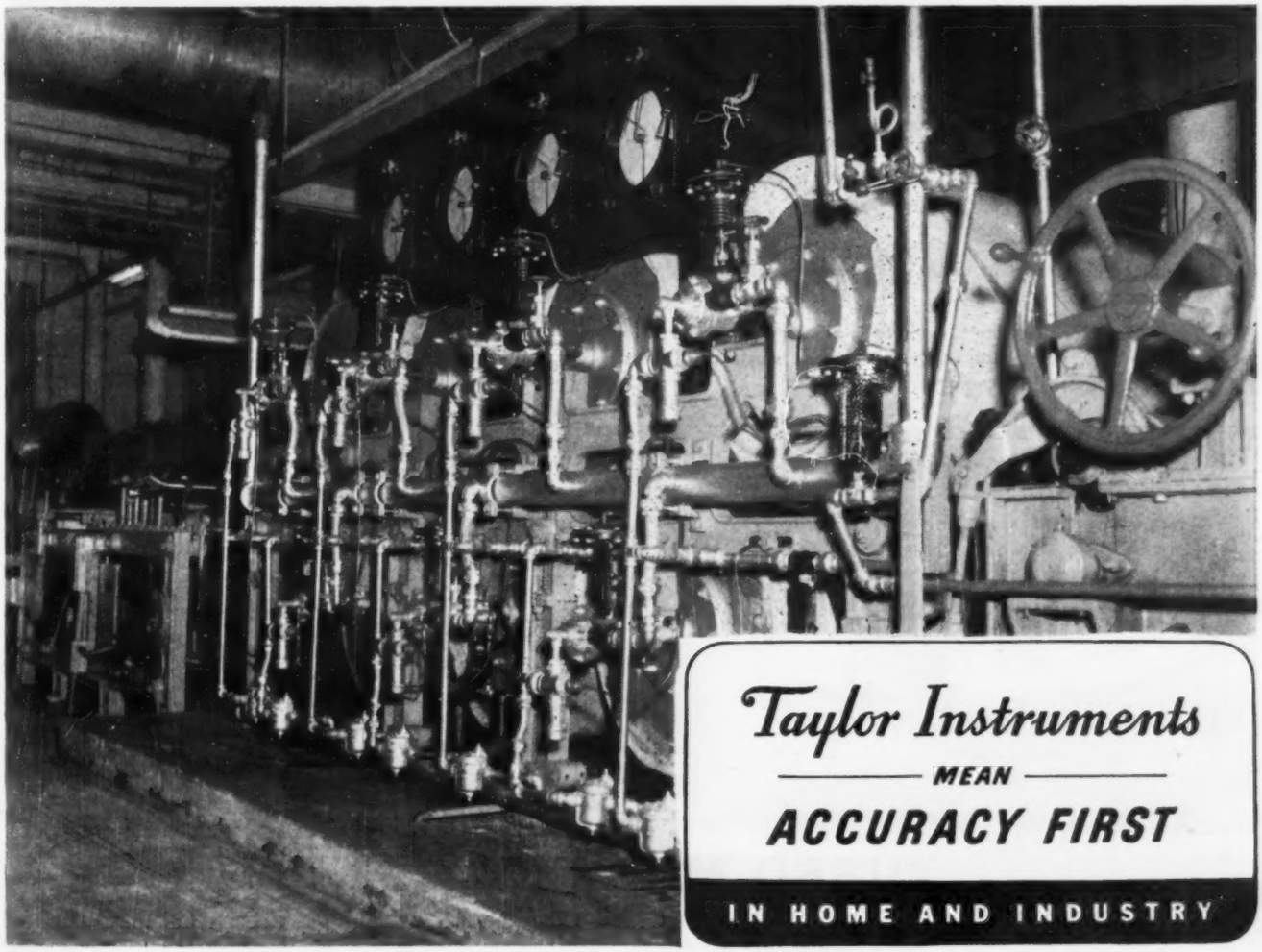
2. Quick heat-up. It automatically compensates for condensate removal difficulties encountered during start up, slow motion or trap troubles by operating a pilot valve which automatically opens condensate by-pass valve, disposing of air and water quickly. No more time lost waiting for traps to empty. Result—heat-up is at least 50% faster.

3. Taylor System of air injection permits condensate to be removed from cans operating below atmospheric pressure. This gives you accurate control *regardless of operating temperature.* Whether you have a 5, 7, 9, or 11 cylinder high-speed slasher, we can equip it with automatic Taylor control (either individual or group).

And of course, we furnish an automatic Taylor control system for every phase of the slashing operation: *size cooking; storage kettles temperature control, size box level and temperature control,* and *slasher cylinder temperature and pressure control.* Ask your Taylor Field Engineer, or write Taylor Instrument Companies, Rochester 1, N. Y., or Toronto, Canada.

• • •

Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.

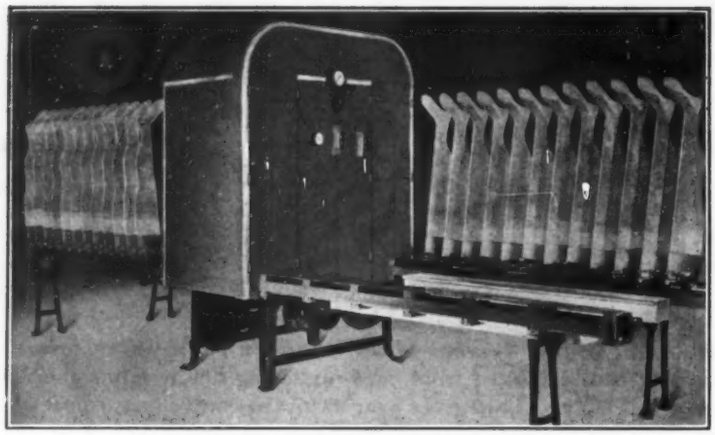


Taylor Instruments

MEAN

ACCURACY FIRST

IN HOME AND INDUSTRY



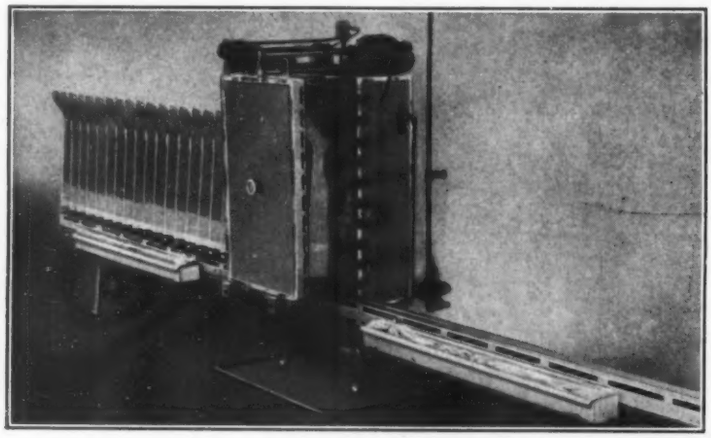
Turbo's boarding machine is the latest offer to the finishing of stockings . . . requires 2 men or 2 girls to operate.

Its "quick dry" feature eliminates prolonged drying in extremely dry air . . . eliminates all static. Adaptable to fine denier hosiery. Designed flow of hot air draft is directed over the toe, down over the leg and welt, and returns to be recirculated. No disturbance of boarded fabric.

Quality stockings with TURBO BOARDING and PREBOARDING MACHINES

An automatic preboarding machine which requires but one man or one girl to operate.

Here is a machine for simplicity in preboarding fine denier hosiery. Accommodates 36 forms which are easily removable. Electrically operated. A.S.M.E. approved pressure chamber.



Turbo's finishing equipment is worthy of your investigation today because it offers savings which increase your profits. Write us for full details.

TURBO MACHINE COMPANY

LANSDALE • PENNSYLVANIA

FASTOGENE*
A dyehouse utility product of merit for

— dyeing
— printing
— finishing

fastogene

A simple after-treatment with *Fastogene* imparts amazing water fastness to cottons, rayons, multifibres... prevents wet migration and drying streaks... halts bleeding of colored grounds into white discharge. *Fastogene* permits wet-piling and cross dyeing and imparts a soft hand to finished fabrics.

Another of the American Aniline range of superior textile auxiliaries.
For detailed information regarding your own particular requirements consult our nearest branch.
A.A.P. technicians are always happy to be of service.

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York, N. Y. • **Plant: Lock Haven, Pa.** • **Branches:** Boston, Mass. Providence, R. I. • Philadelphia, Pa. • Charlotte, N. C. • Chicago, Ill. • Los Angeles, Cal. Chattanooga, Tenn. • **Dominion Anilines & Chemicals Ltd.** • Toronto, Canada • Montreal, Canada

*Reg. U. S. Pat. Off.

It's new...

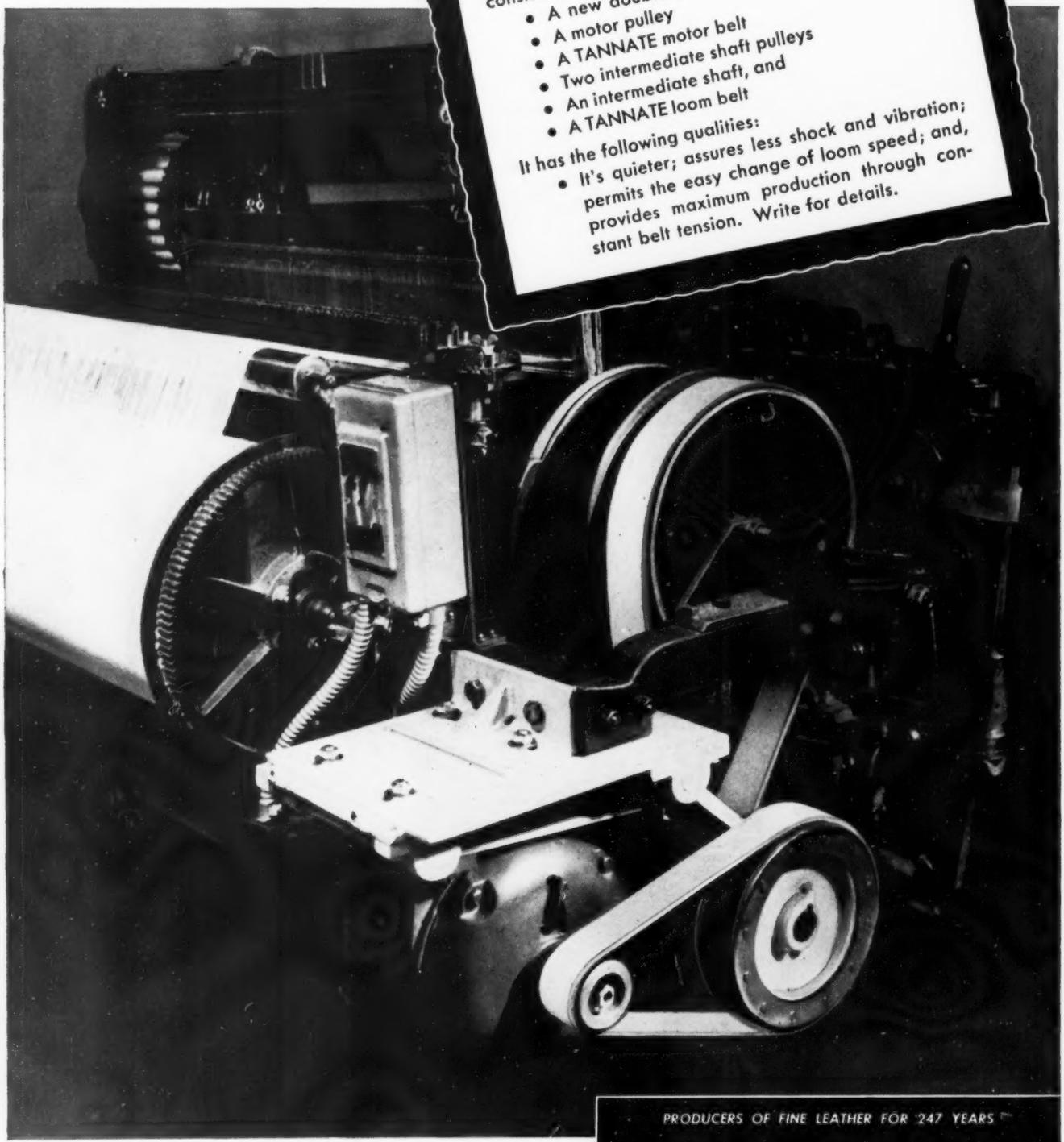
RHOADS TANNATE-ROCKWOOD LOOM DRIVE

The new Rhoads TANNATE-ROCKWOOD Loom Drive consists of:

- A new double pivoted motor base
- A motor pulley
- A TANNATE motor belt
- Two intermediate shaft pulleys
- An intermediate shaft, and
- A TANNATE loom belt

It has the following qualities:

- It's quieter; assures less shock and vibration; permits the easy change of loom speed; and, provides maximum production through constant belt tension. Write for details.



STRAPS FOR LOOMS AND OTHER MECHANICAL LEATHER PRODUCTS

PRODUCERS OF FINE LEATHER FOR 247 YEARS

J. E. RHOADS & SONS

35 NORTH SIXTH ST., PHILA. 6, PA.

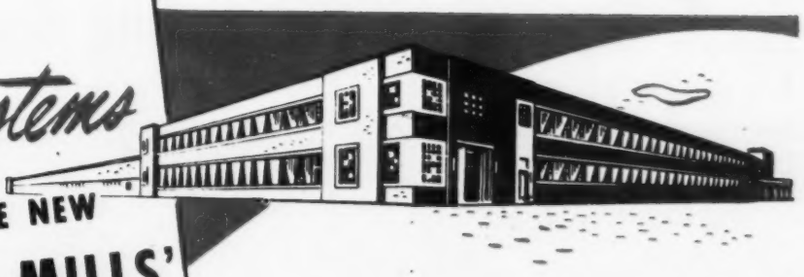
NEW YORK • CHICAGO • ATLANTA

ROSS *Air Systems*

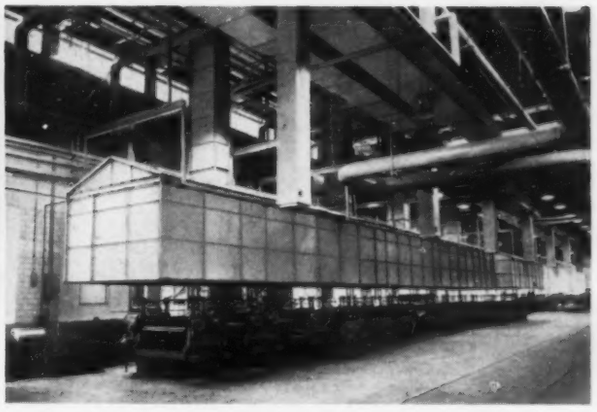
WERE SPECIFIED FOR THE NEW

SPRINGS COTTON MILLS'

GRACE BLEACHERY



ROSS Transite Hood over Dye Jigs. Note ducts and outlets for comfort cooling in operating aisle.



View of Open Width Bleach Range showing ROSS Transite Hoods over Dry Cans and Williams Units. Note duct distributing heated air over ceiling.

Most advanced methods of air handling for the industry's most modern bleachery

Of the many notable features of Springs Cotton Mills' New Finishing Plant, none has aroused more interest than the scientific use of air for processing operations. The thoroughly modern Air Systems designed by ROSS engineers effectively confine and remove vapors from processing equipment, such as dye jigs, dry cans, etc., prevent condensation on ceilings and walls, eliminate fog, remove evaporation and provide comfort cooling for operators. In all, these ROSS Systems handle 700,000 cfm. of air. Springs Cotton Mills provides another example of how the industry's most modern and best equipped plants depend upon ROSS Systems for all air handling problems.

ROSS SYSTEMS FOR FINISHING PLANTS

HEATING • VENTILATING • COOLING • DRYING

ROSS SYSTEMS

J. O. ROSS ENGINEERING

CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

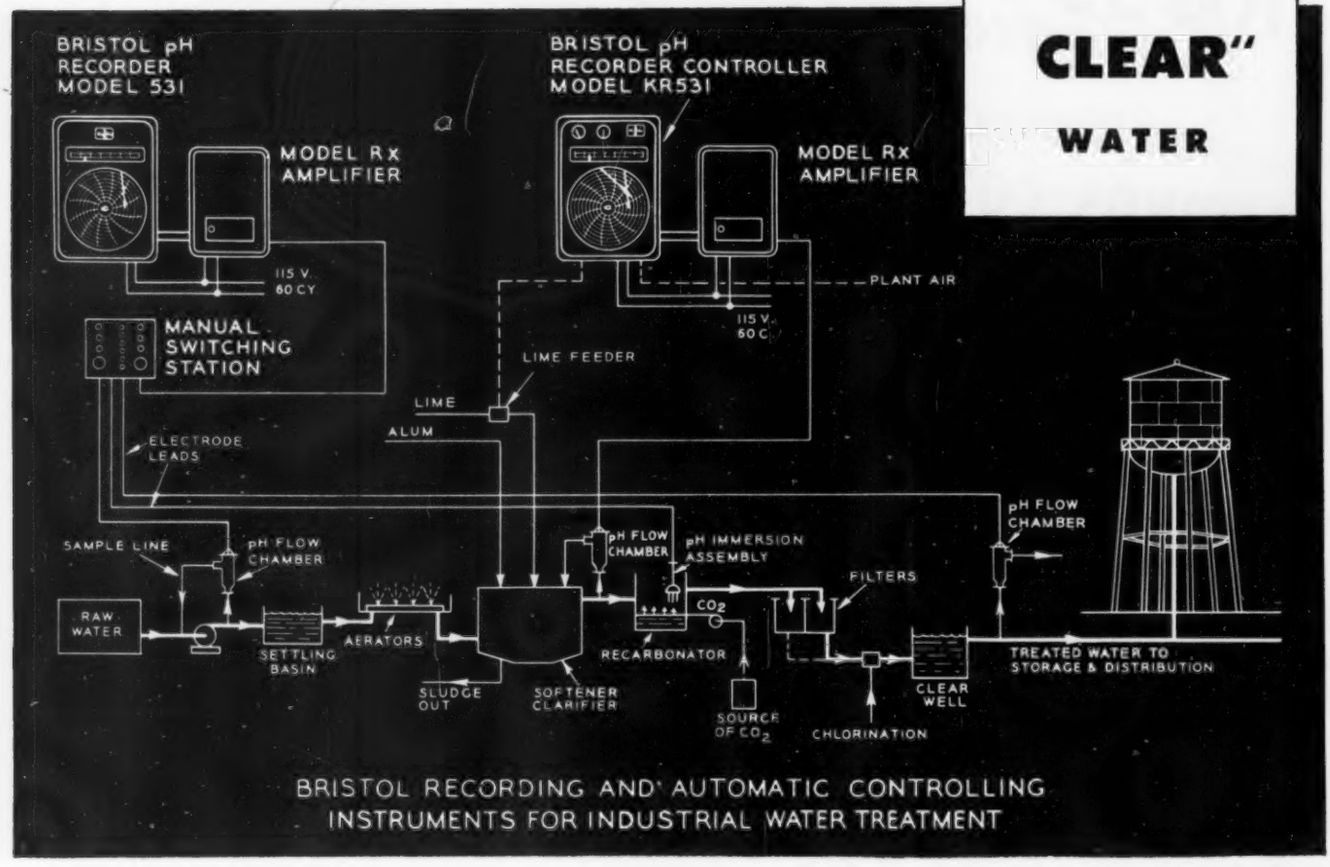
350 MADISON AVENUE NEW YORK 17, N. Y.

201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-14

ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

Wash Down Your Processing Costs

WITH "BRISTOL CLEAR" WATER



BRISTOL RECORDING AND AUTOMATIC CONTROLLING INSTRUMENTS FOR INDUSTRIAL WATER TREATMENT

Controlling Water Treatment with Instruments Improves Each Process Using Water —Lowers Purification Costs

When Bristol recording and control instruments take over the problem of preparing water for use in dyeing, bleaching, washing and scouring, processing efficiency goes up, water purification cost goes down.

Automatic control of water treatment provides a supply of water of the correct pH value, regardless of varying raw water conditions. And it makes the water "Bristol-Clear" at much less expense than without the automatic control feature.

As the diagram shows, Bristol pH instruments keep an eye on raw water and apply the exact amount of treatment needed for uniform purity. The complete installation of recorders and controllers pays for itself in savings made in process work and in reducing supervision of water treatment.

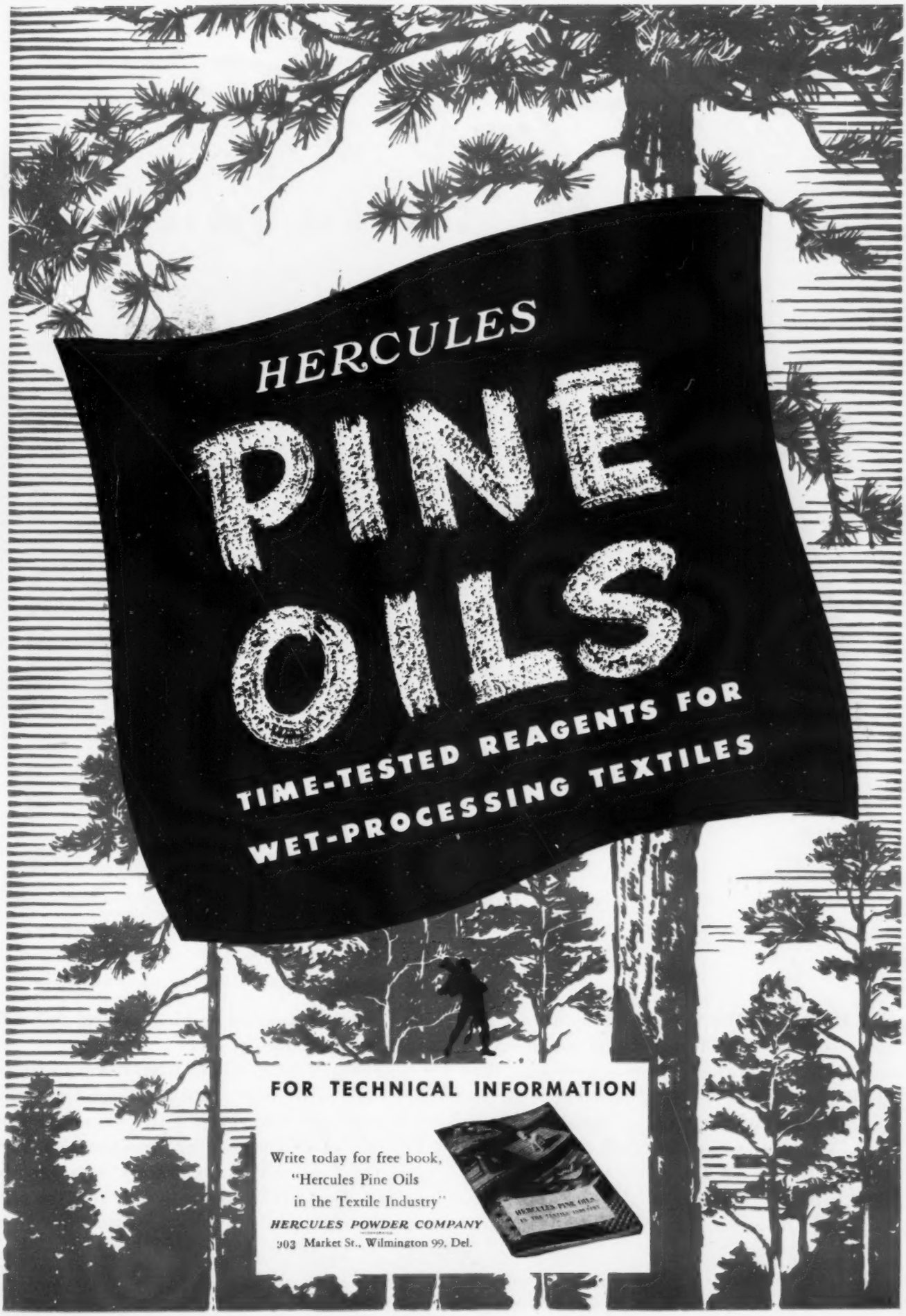
Write for Bulletin pH1302 on Bristol Continuous pH Recorders and Controllers and investigate Bristol instruments, too, for recording and automatically controlling temperatures, flow, liquid level and pressure. THE BRISTOL COMPANY, 157, Waterbury 91, Conn. (The Bristol Co. of Canada, Ltd., Toronto, Ont. Bristol's Instrument Co., Ltd., Lynch Lane, Weymouth, Dorset, England.)

60 YEARS...1889-1949

BRISTOL

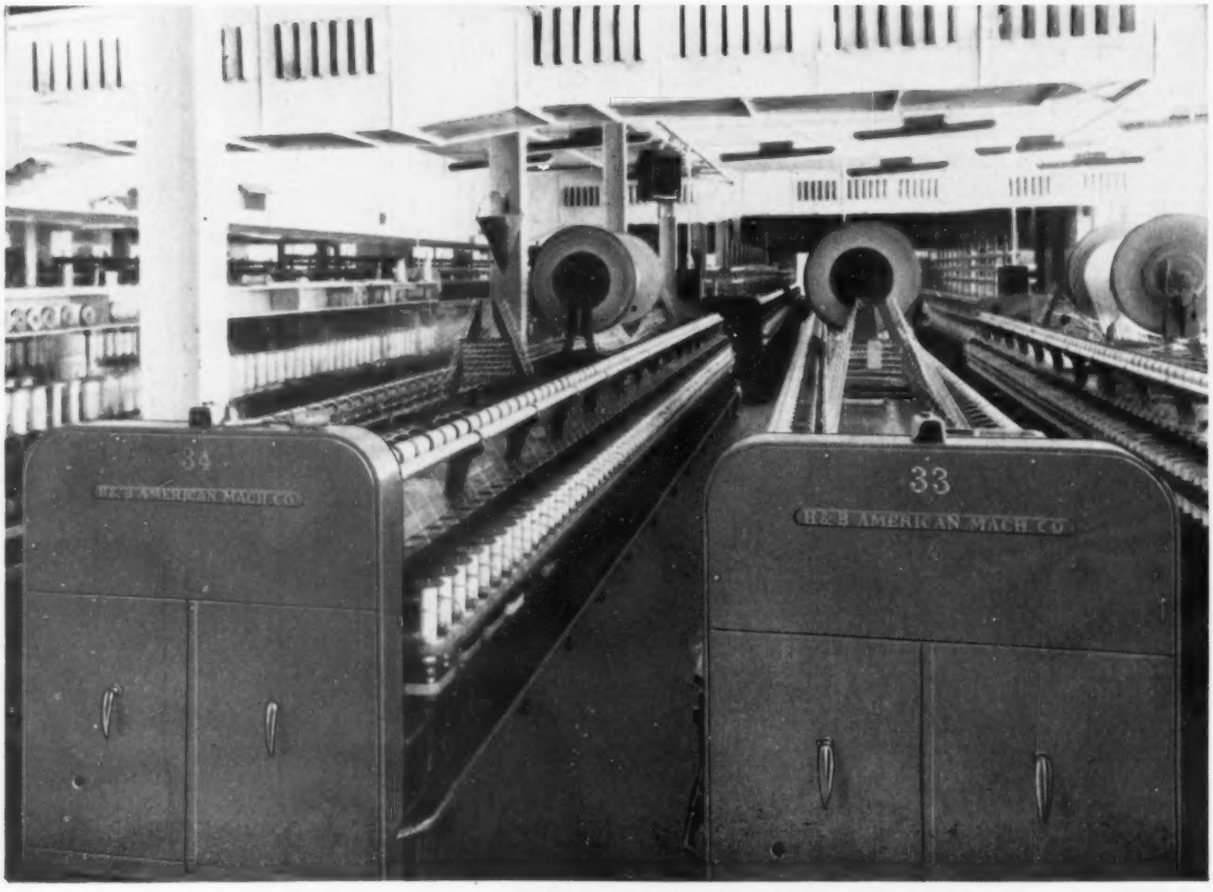
Engineers Process Control for Better Products and Profits

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS


HERCULES
PINE
OILS
TIME-TESTED REAGENTS FOR
WET-PROCESSING TEXTILES
FOR TECHNICAL INFORMATION
Write today for free book,
"Hercules Pine Oils
in the Textile Industry"
HERCULES POWDER COMPANY
903 Market St., Wilmington 99, Del.

Perfect Twist is Required

SO IT'S H&B BEAM TWISTERS



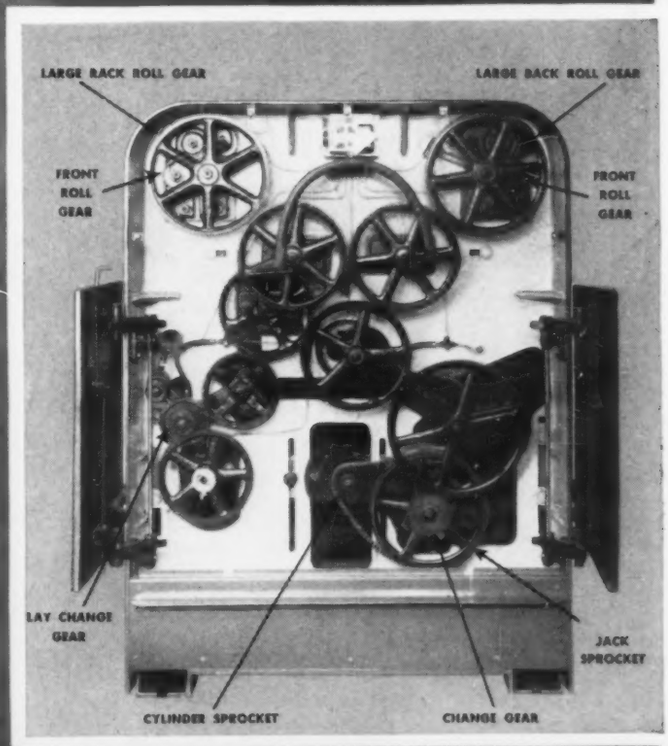
Partial view of H&B Beam Twister installation at Aldora Mill, subsidiary of The General Tire and Rubber Company, Barnesville, Ga. There are 40 twisters in all, 5½" gauge, 4" dia. rings, 8" traverse, 160 spindles per frame.

THE Aldora Mill is running rayon yarn for tire cord, and perfect twist is an absolute necessity. Therefore, it is significant that H&B Beam Twisters were selected to do the job. The supply package of these machines is a beam instead of the customary cone or tube. They also have case hardened double line bottom rolls and single line top rolls. Beam stands are equipped with ball bearings and a brake assembly which assure uniform and even tension let off.

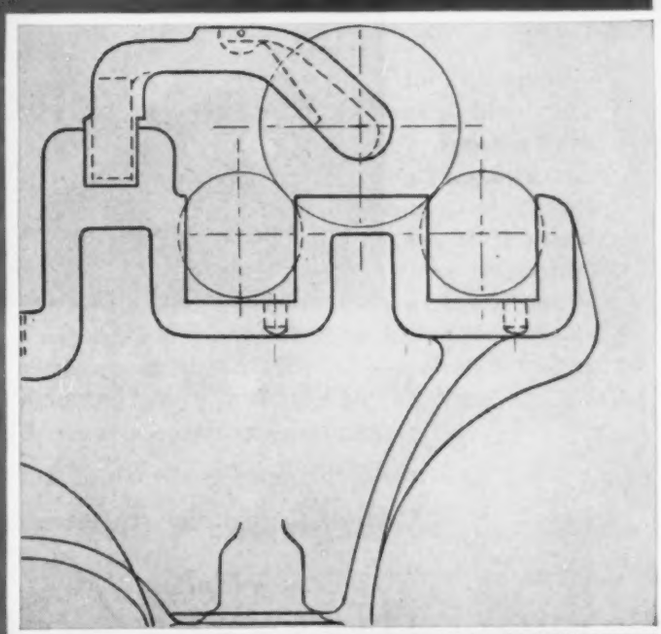
The superstructures of H&B Beam Twisters are built to accommodate one or more beams as necessary. Thus, if a mill is running two beams equally divided between the head end and the foot end of the frame, it can easily shift to single beam operation by moving one set of beam stands to the center position.

Why Quality Yarn Mills like H&B Beam Twisters

Head end of machine, showing Bijur lubrication system and silent chain drive from cylinder to jack shaft.



Cross section of roll stand, showing double line bottom rolls and single line top roll.



1. May be equipped to twist wet or dry.
2. Anti-friction tape tension pulley helps to maintain constant spindle speed.
3. Ball bearing thrust washer in builder drive prevents dwelling at top and bottom of stroke and builds a better supply for high speed winding.
4. Silent chain drive from cylinder to jack shaft.
5. Replaceable bottom roll bearings to reduce maintenance cost.
6. Anti-friction bearings on cylinders to save power and maintenance.
7. Bijur lubrication system.

Tell us your twisting requirements, and let us recommend an installation.

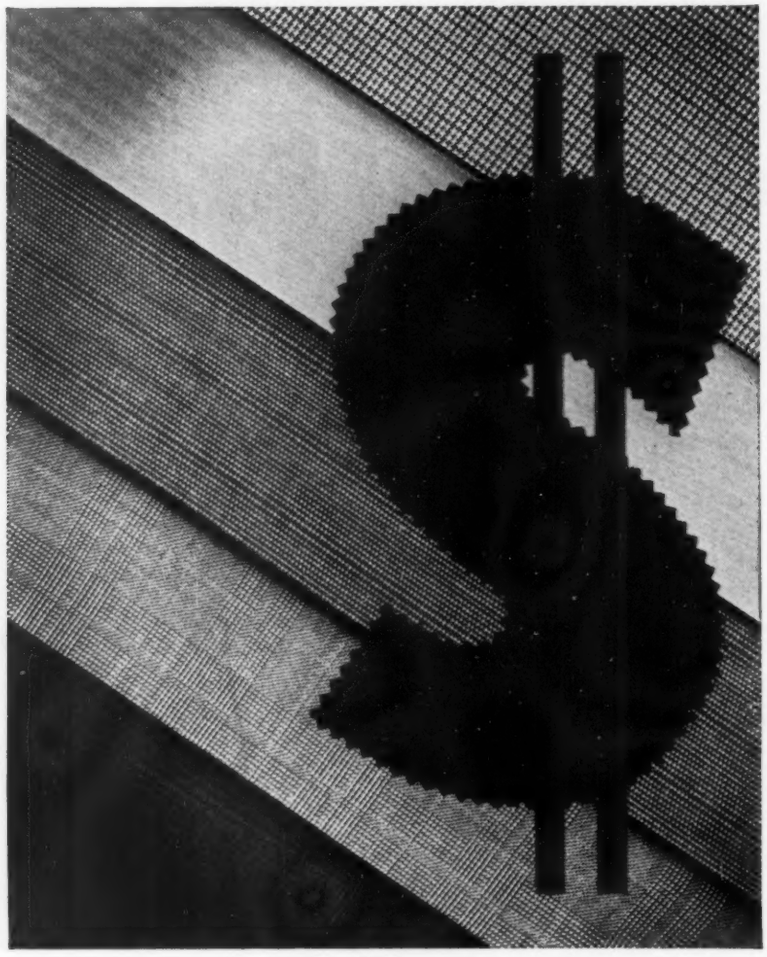
H&B AMERICAN MACHINE CO.

Builders of Modern Textile Machinery

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.

BRANCH OFFICES: — ATLANTA, GA., 815 Citizens and Southern National Bank Building; CHARLOTTE, N. C., 1201 Johnston Building

Plenty of price appeal in "the good rayon suit" market



Men with an eye to cool, well-groomed summer comfort . . . *at a price* . . . vote for the good rayon suit. As a result, this market promises to be the new "gold rush of '49". Enjoy your share of the profits. Celanese Corporation of America, 180 Madison Ave., New York 16.

the Best rayon suitings contain

Celanese* ACETATE RAYON STAPLE FIBER

*Reg. U.S. Pat. Off.

A Better Product and More of It with "Buffalo" AIR CONTROL

Comfort Conditioning for Worker Efficiency

WHAT is worker productivity worth to you? Many textile and other firms have discovered the big difference "Buffalo" air conditioning can make! And "Buffalo" costs are not high when you figure the years of trouble-free service they give. The model "F" FPC Cabinet above can filter-clean your air, cool it, cool and dehumidify or heat and humidify in any desired combination. Available in vertical (as above) or horizontal models to suit the installation.

Write for Bulletin 3703 on the complete Model "F" line of Comfort Conditioning cabinets!

Air Washing for Quality Control

KEEPING dust down and humidity right—in short, keeping air conditions right—is the quality control job "Buffalo" Air Washers do in textile mills! These simply-constructed units draw your air through a spray chamber. Here, all solid matter in the air is made thoroughly wet and heavy then "scrubbed out" on surfaces of specially-designed eliminator plates. Available as simple air washers, or as the POW Cabinet shown conditioning along with the air washing.

Air Problems Solved!

Order Your Copy Now. FAN ENGINEERING, 5th EDITION, is industry's authority on air and air problems. 808 pages. Pocket size. Every engineer should have a copy. Send check or money order. $6.00 postpaid..

"Buffalo" FIRST FOR FANS

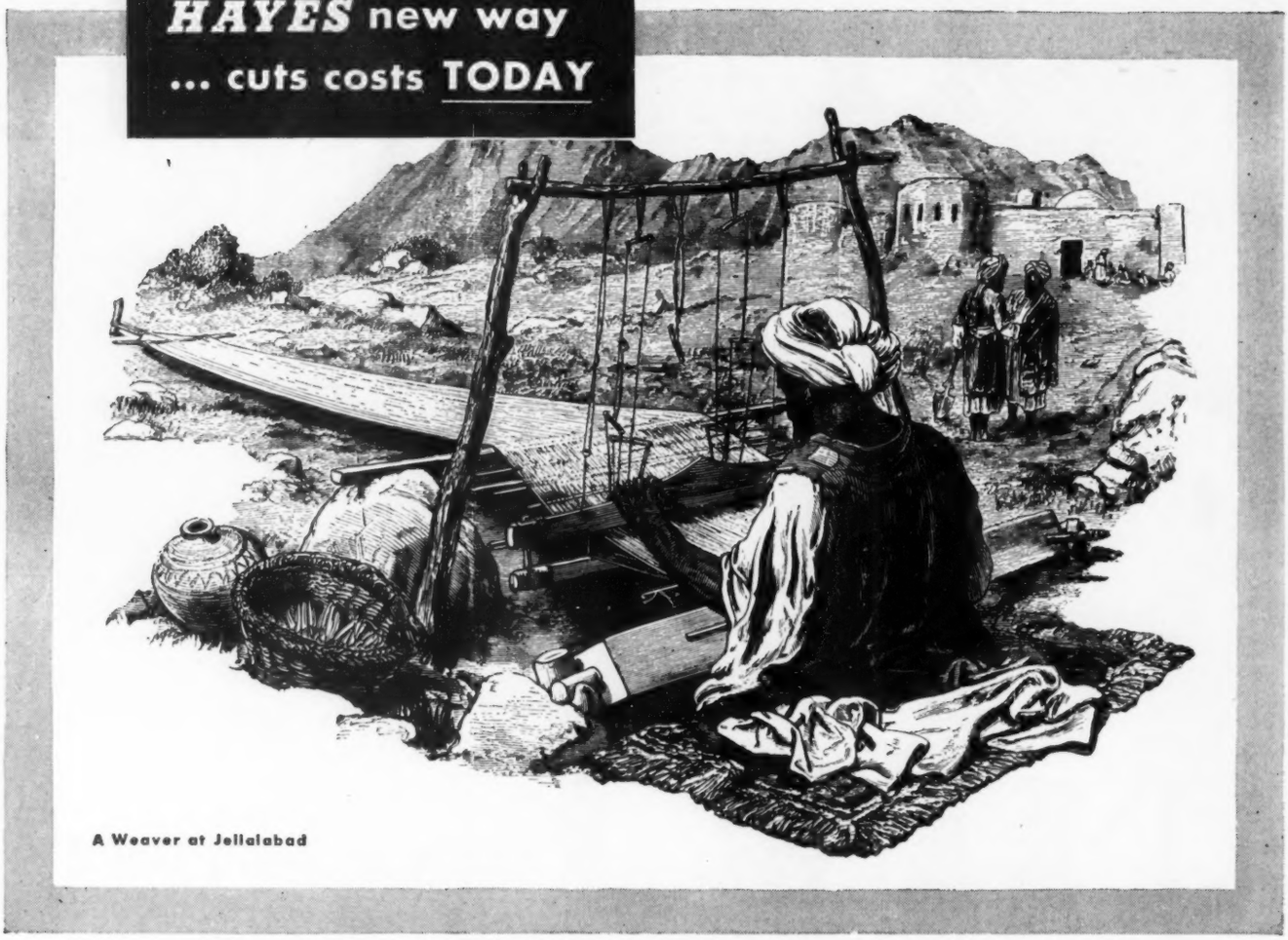
BUFFALO FORGE COMPANY

175 MORTIMER ST. BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Branch offices in all Principal Cities

VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

HAYES new way
... cuts costs TODAY



A Weaver at Jellalabad

Profit is Greater When Light Metal Beams Cut Costs

Yard-a-day production on primitive equipment has given way to modern high speed production machines.

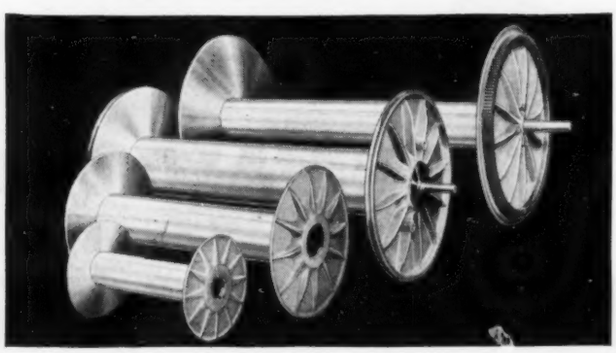
Newest development to enable textile mills to attain the maximum in efficiency on modern equipment at lowest cost are the light metal beams pioneered and produced by Hayes Industries.

These Hayes aluminum and magnesium beams are accurately cast and machined. Perfactly balanced, they rotate smoothly and uniformly without vibration. Flanges and barrels are satin smooth, highly polished . . . cannot splinter, snag or rust . . . sharply reduce rejects . . . when fully loaded with fine denier acetate yarn head deflection is scarcely measurable.

Substantial savings are possible because Hayes beams weigh less than half as much as conventional types. Shipping and handling costs are reduced . . . manpower productivity is increased . . . worker fatigue is lessened.

Hayes Loom Beams, Tricot Beams and Section Beams fit all standard warpers and machines. Shafts of loom and section beams are removable.

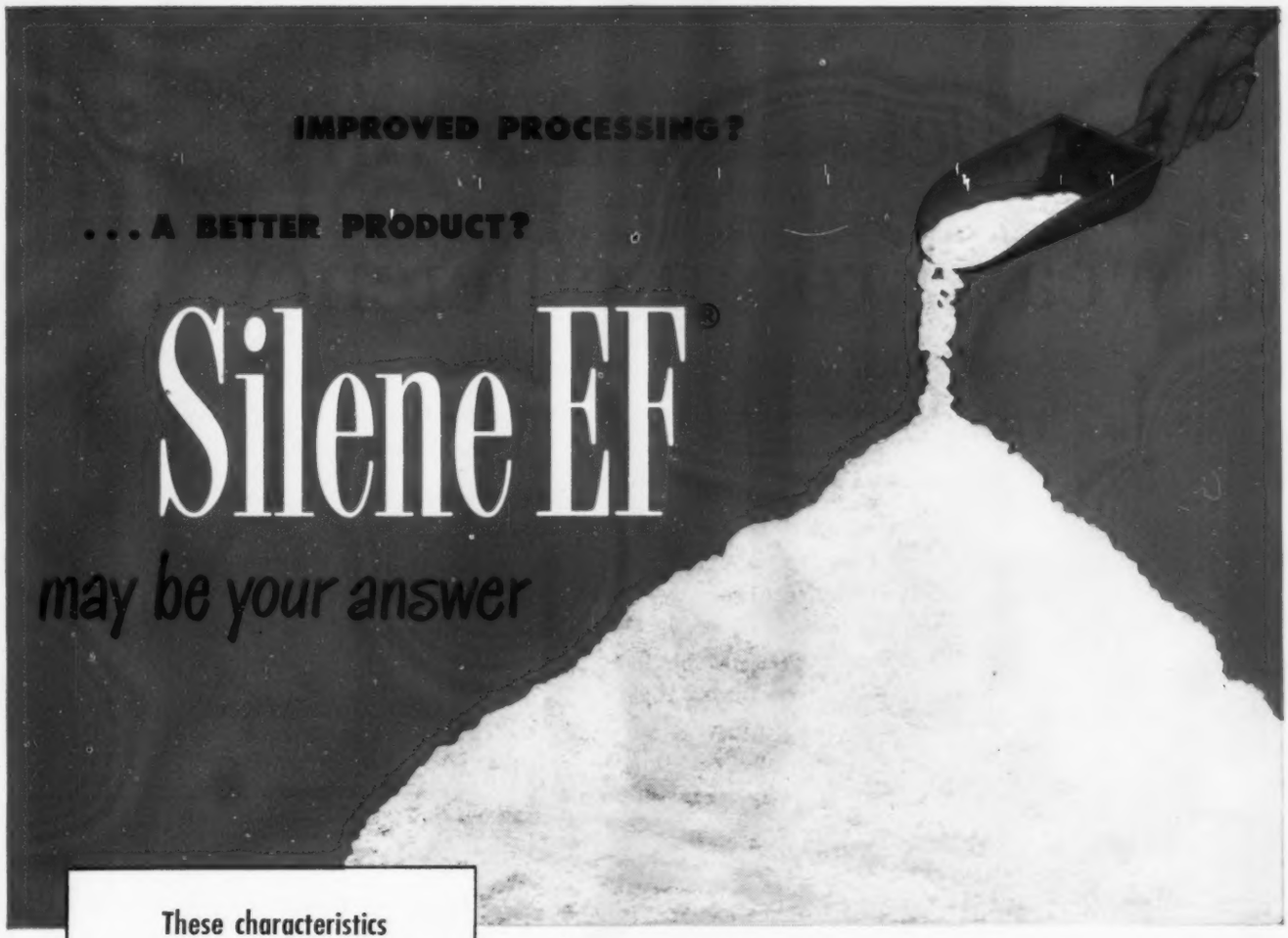
Write or wire for complete information on Loom Beams, Section Beams and Tricot Beams. Ask for Catalog 1-21.



HAYES

INDUSTRIES, INC.

HOME OFFICE: Jackson, Michigan



These characteristics may indicate a potential for Silene EF in your operations

Silene EF is a white, very finely divided, precipitated hydrated calcium silicate with the following approximate analysis:

CaO	18.5
SiO_2	64.0
Loss on Ignition	16.5
Alkaline reaction	pH 10.1
Particle Size	.035 microns
Bulk Density	15 to 16 lbs. per cu. ft.
Specific Gravity	2.1
Refractive Index	1.472
Oil Absorption	120-130

This unique Columbia product has proved its value in the following established uses:

Reinforcing pigment in rubber

Anti-caking agent

Acid acceptor in plastics and rubber

Adsorbent in chromatographic analysis

Suspending agent

Throughout the war, Silene EF was used predominantly by the rubber industry and continues to be in increasing demand in this field. Expanded production is now providing additional volumes of Silene EF for other uses. If you are interested in exploring the possibilities which Silene EF may afford your products, you can obtain comprehensive data accumulated on the performance of this material in rubber, plastics and other uses. Samples for experimental purposes are also available. Write to Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth at Bellefield, Pittsburgh 13, Pa.

COLUMBIA CHEMICALS

CHICAGO · NEW YORK · BOSTON · CINCINNATI · MINNEAPOLIS · CHARLOTTE · ST. LOUIS · CLEVELAND · PITTSBURGH · PHILADELPHIA · SAN FRANCISCO

PAINT • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

Let's "spin a yarn" of weave room efficiency...

Size preparation, size pick-up and drying affect ultimate results . . . determine weave room efficiency.

Brown Complete Slasher Control, designed and engineered for cotton and rayon warps, oversees the entire operation . . . size cooking and storage, size box level and temperature, cylinder temperature. And the Brown Moist-O-Graph, with its detector roll on the warp, correlates everything into a unified system . . . controls the speed of the slasher and maintains the desired regain.

You'll profit when you turn to Brown Complete Slasher Control. Write for your copy of Catalog 9305 for complete information on Brown Instruments for Textile Processes.

MINNEAPOLIS-HONEYWELL REGULATOR CO.
BROWN INSTRUMENTS DIVISION
4492 Wayne Avenue, Philadelphia 44, Pa.
Offices in principal cities of the United States, Canada and throughout the world

Typical results are found in these excerpts from a letter from Mr. T. S. Harris, General Superintendent, Russel Mfg. Co., Alexander City, Alabama: "*Complete Brown Controls for our slashers increased speed 25% . . and weave room efficiency 2% . . eliminated slasher overtime . . improved warp quality . . made slasher operation easier for employees. Our 2 Moist-O-Graphs paid for themselves within 16 weeks.*"

with

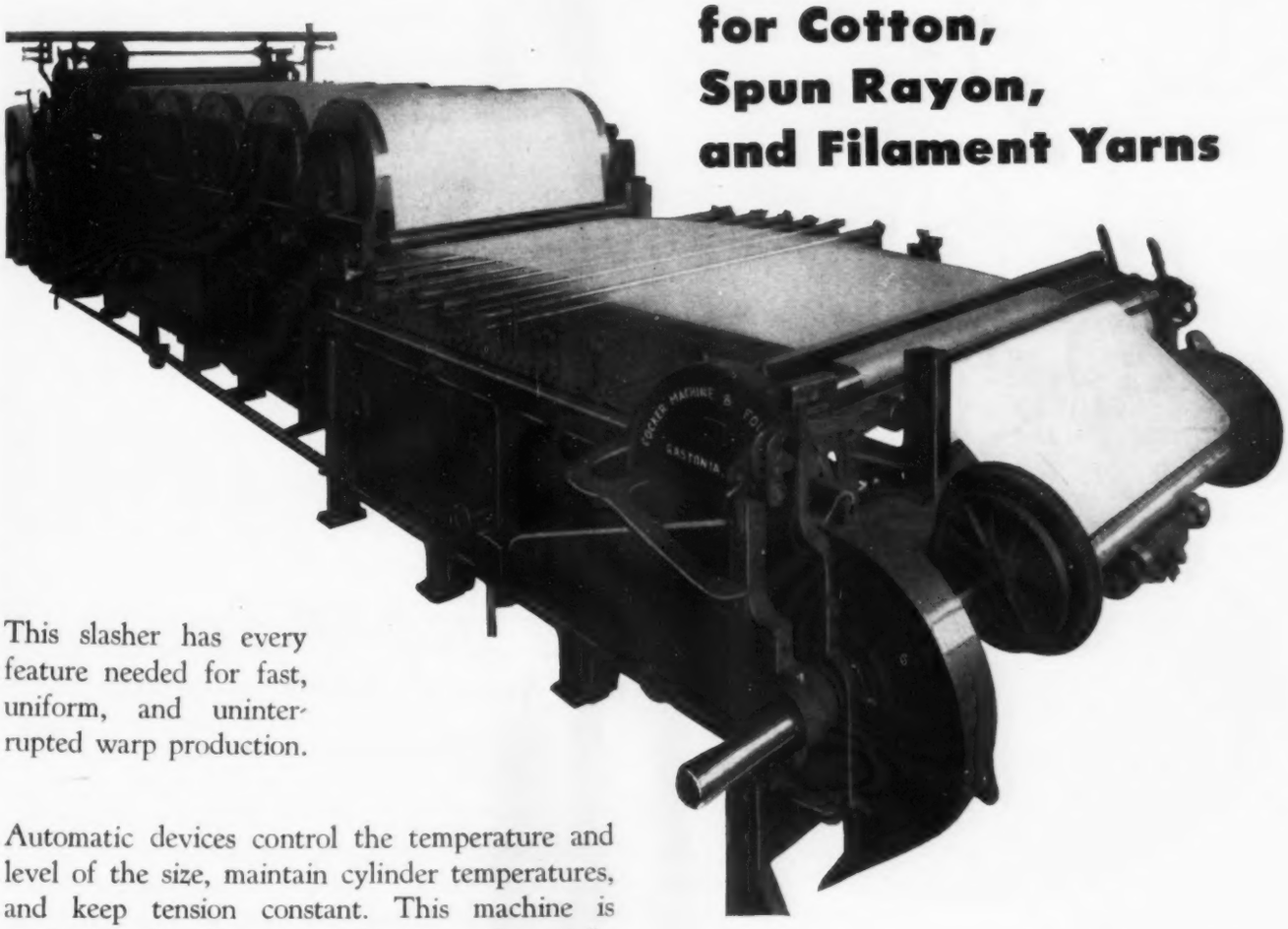
Brown Complete Slasher Control

BROWN *Advanced Instrumentation* FOR THE TEXTILE INDUSTRY

Product of MINNEAPOLIS Honeywell

The Cocker High Speed 9-Cylinder Slasher

for Cotton, Spun Rayon, and Filament Yarns



This slasher has every feature needed for fast, uniform, and uninterrupted warp production.

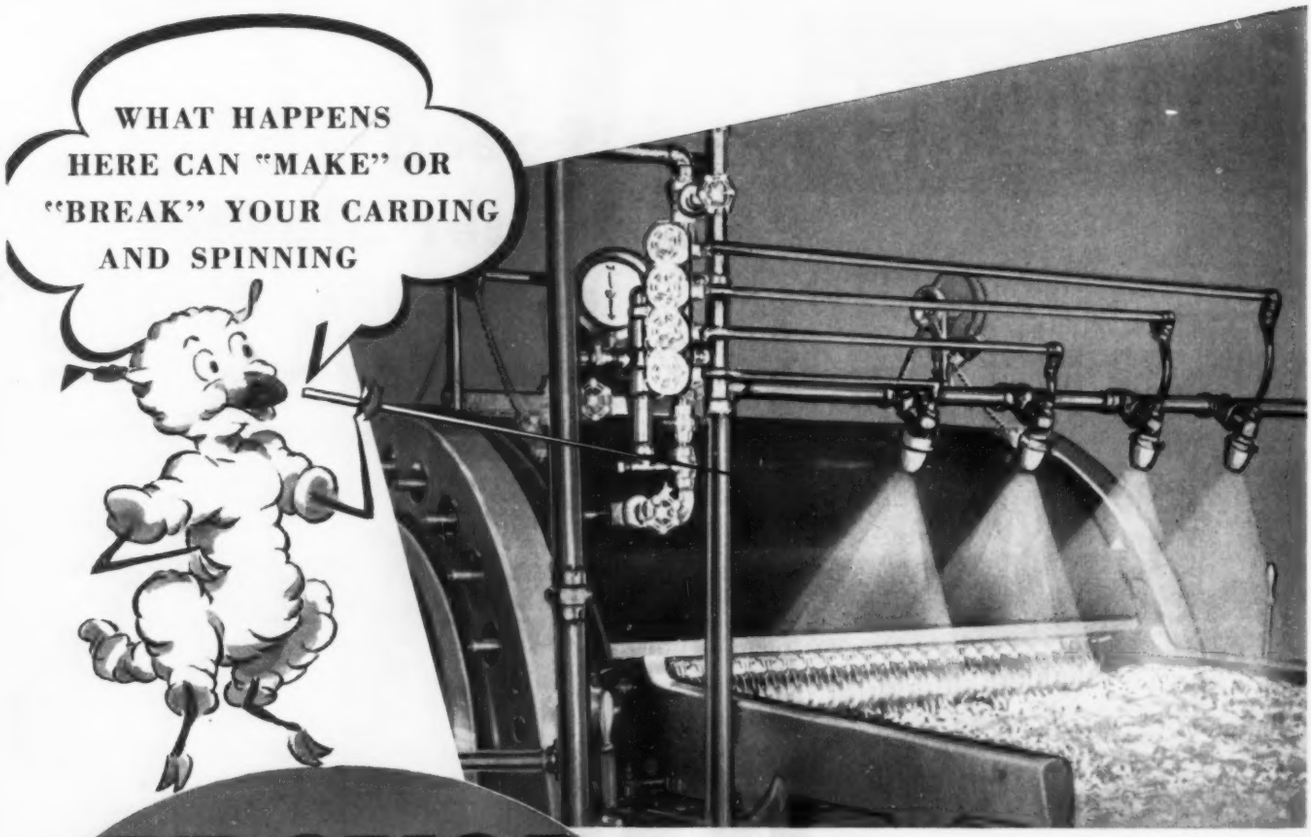
Automatic devices control the temperature and level of the size, maintain cylinder temperatures, and keep tension constant. This machine is equipped with all necessary devices, such as tachometer, input and output counters, cut markers, cut indicators, and pressure gauges. It is entirely push-button controlled and will operate up to 100 yards per minute.

This slasher can be run continuously at high speeds because its heavy construction and ball bearings keep vibration extremely low. Down time is kept to a minimum because all parts are easy to get at and are simple in construction.

Write or wire us for full information about this slasher or about other Cocker warp preparatory equipment.

Cocker Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT



PROXOL

the Multi-Quality WOOL OIL

PROCTER & GAMBLE MADE IN U.S.A.

the right answer

FOR YOUR WOOL CARDING AND SPINNING PROBLEMS

It's no trick to apply wool oil. And most good wool oils will give reasonably satisfactory results in carding and spinning—from a lubrication standpoint. But that's only part of the story! When the lubricating job is done, *will the oil scour out easily?*

If it falls down here, you know what can happen. Some oils are difficult to scour out. Others oxidize on the fibers, yarns and fabrics during storage, causing fabric discoloration, poor scouring, uneven dyeing and objectionable odors.

PROXOL lubricates efficiently—scours easily

Wool oiled with Proxol is properly oiled for smooth efficient carding and spinning. Fiber breakage is minimized. Furthermore, Proxol scours out easily and thoroughly after its lubricating job is done, with 40% to 75% savings in the soap normally used.

Your worries about discoloration and undesirable odors in stored fibers or fabrics are over when you use Proxol. Try Proxol. You'll find it a paying investment in terms of trouble-free carding, spinning and scouring.

Procter & Gamble

what is Proxol?

Proxol is a clear wool oil of exceptionally uniform quality. Highly resistant to oxidation. Pour point less than 20° F. Self-emulsifiable in soft or hard water at all temperatures. Emulsions are extremely stable — stay the same after standing as when freshly prepared. Small emulsion particle size assures fast, even penetration. Antistatic—consistently produces less waste than is normally expected. Proxol's efficient lubrication and proper drag produce stronger, more uniform yarns, better fabrics . . . reduce stripping. Non-corrosive . . . assures longer life for card clothing. Proxol means fewer ends down...more yarn per spinning operator hour.

PROXOL

is made by the makers of Olate, the universal low-titre textile soap

Here's the story on the PROVED loom motor

HOW IT.....

- Delivers more power to the loom
- Consumes fewer power dollars
- Lowers maintenance costs
- Has a longer, efficient life
- Operates coolly . . . and
- Pays dividends in better loom efficiency

YOU CAN BE SURE IF IT'S Westinghouse

Here are pertinent facts about the Westinghouse Loom Motor . . . the *proved* loom motor, developed co-operatively by Westinghouse and leading loom manufacturers. Many years of successful operation in thousands of textile mills prove its ability to give you the kind of performance you want. That's why you'll want the complete story in bulletin B-3778, just off the press. To get your copy call your nearest Westinghouse office or write to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21490

Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

Loom Motors

Hooker Sulfides

are remarkably free from impurities

Commercial chemicals can approach the purity of laboratory chemicals. When you choose Hooker Sulfides, that's what you expect and will get in every shipment.

Manufacturing refinements and closely controlled operations result in the production of sulfides that are practically iron free. In Hooker Sodium Sulfide you will find no more than 8 ppm Fe and in the Sodium Sulfhydrate no more than 5 ppm Fe.

To safeguard your operations from uneconomical side reactions due to impurities of reactants, use uniformly high purity sulfides from Hooker.

Technical data sheets and test samples may be obtained when requested on your company letterhead.

SODIUM SULFIDE Na_2S

Description: Light yellow colored solid in flake form. Rapidly soluble in water; slightly soluble in alcohol; insoluble in ether.

Physical Data:

Mol. Wt.	78.1
M. P.	100° C

Analysis

Na_2S	60 to 62%
NaCl	1.5% Max.
Other Na Salts	2.0% Max.
Fe	8 ppm Max.
Cu, Ni, Cr, Mn, Pb	1 ppm Max.
Water of crystallization	36.5 to 34.5%

Uses: In unhairing hides and wool pulling; desulfurizing viscose rayon; in manufacture of dyestuffs, chemical intermediates, paper pulp, special glass, soap and rubber; as an ingredient of dye liquor for textile dyeing; in calico printing, boiling out linen; ore flotation and metal refining.

Shipping Containers: Steel drums ..... 90 and 350 lbs. net.

SODIUM SULFHYDRATE NaSH
(sodium hydrosulfide)

Description: Light lemon colored solid in flake form. Completely and rapidly soluble in water, alcohol and ether.

Physical Data:

Mol. Wt.	56.1
M. P.	55° C

Analysis

NaSH	70 to 72%
Na_2S	0.25 to 2.5%
NaCl	0.4 to 0.8%
Na_2SO_3 and $NaHCO_3$	0.04 to 0.4%
Fe	5 ppm Max.
Cu, Ni, Cr, Mn, Pb	1 ppm Max.
Water of crystallization	28 to 26%

Uses: In unhairing hides, in desulfurizing viscose rayon; in preparation of dyestuffs and other organic chemicals such as thioamides, thiourea, thioglycolic acid, thio- and dithiobenzoic acids, sodium thiosulfate.

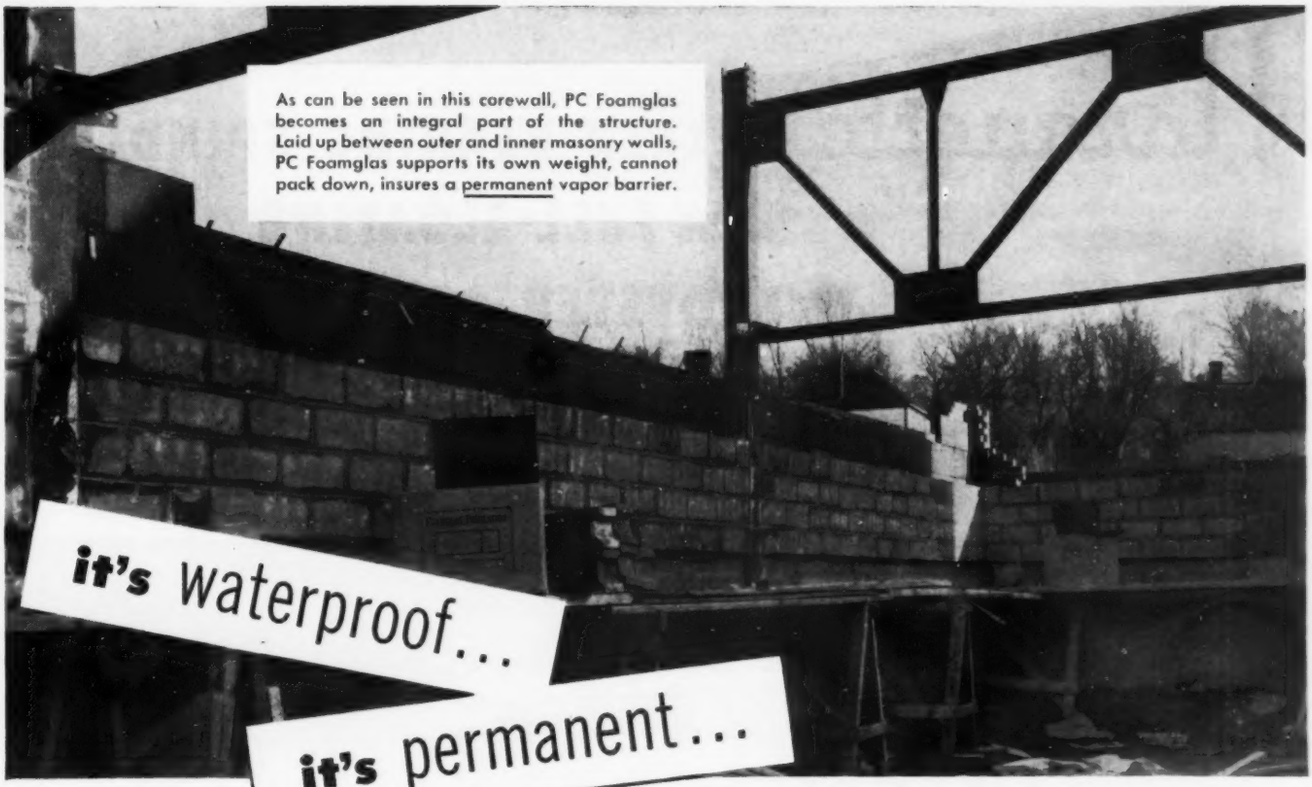
Shipping Containers:
Lacquer-lined steel drums ..... 90 and 350 lbs. net.

HOOKER ELECTROCHEMICAL COMPANY

14 Forty-Seventh St., Niagara Falls, N. Y.
New York, N. Y. Wilmington, Calif. Tacoma, Wash.

HOOKER CHEMICALS

Caustic Soda Chlorine Muriatic Acid Sodium Sulfide Sodium Sulfhydrate


As can be seen in this corewall, PC Foamglas becomes an integral part of the structure. Laid up between outer and inner masonry walls, PC Foamglas supports its own weight, cannot pack down, insures a permanent vapor barrier.
it's waterproof...
it's permanent...

it's FOAMGLAS

■ Water *cannot* get into or through PC Foamglas insulation. That's one of the reasons why it's so useful for textile mills. For where the high humidity levels maintained in such plants often cause ordinary insulating materials to lose much of their efficiency . . . Foamglas insulation, being waterproof, maintains its original insulating efficiency *permanently*. No vapor seal is required.

Big, rigid blocks of Foamglas are composed of millions of tiny hollow glass cells that give the material excellent insulating properties. And, besides being waterproof, Foamglas is also weatherproof, fireproof and verminproof. It doesn't rot, check, warp, swell, or shrink. It can be used on walls, floors, roofs and ceilings . . . without fear of costly repairs, maintenance or replacement.

Investigate the possibilities of *permanent* PC Foamglas before you insulate your plant. Send for our latest authoritative booklets. They are packed full of helpful facts. Just fill in and mail the coupon below and we'll send your free copies. There's no obligation.

This is FOAMGLAS®

The entire strong, rigid block is composed of millions of sealed glass bubbles. They form a continuous structure, so no air, water, vapor or fumes can get into or through the Foamglas block. In those closed glass cells, which contain inert air, lies the secret of the material's permanent insulating efficiency.

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS

Pittsburgh Corning Corporation
Dept. V-39, 307 Fourth Ave.
Pittsburgh 22, Pa.

Please send me, without obligation, your FREE booklets on the use of PC Foamglas insulation for:

Roofs _____ Walls _____ Floors _____

Name _____

Address _____

City _____ State _____

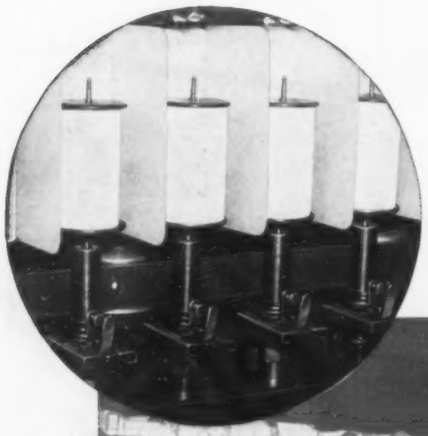
PITTSBURGH PC CORNING

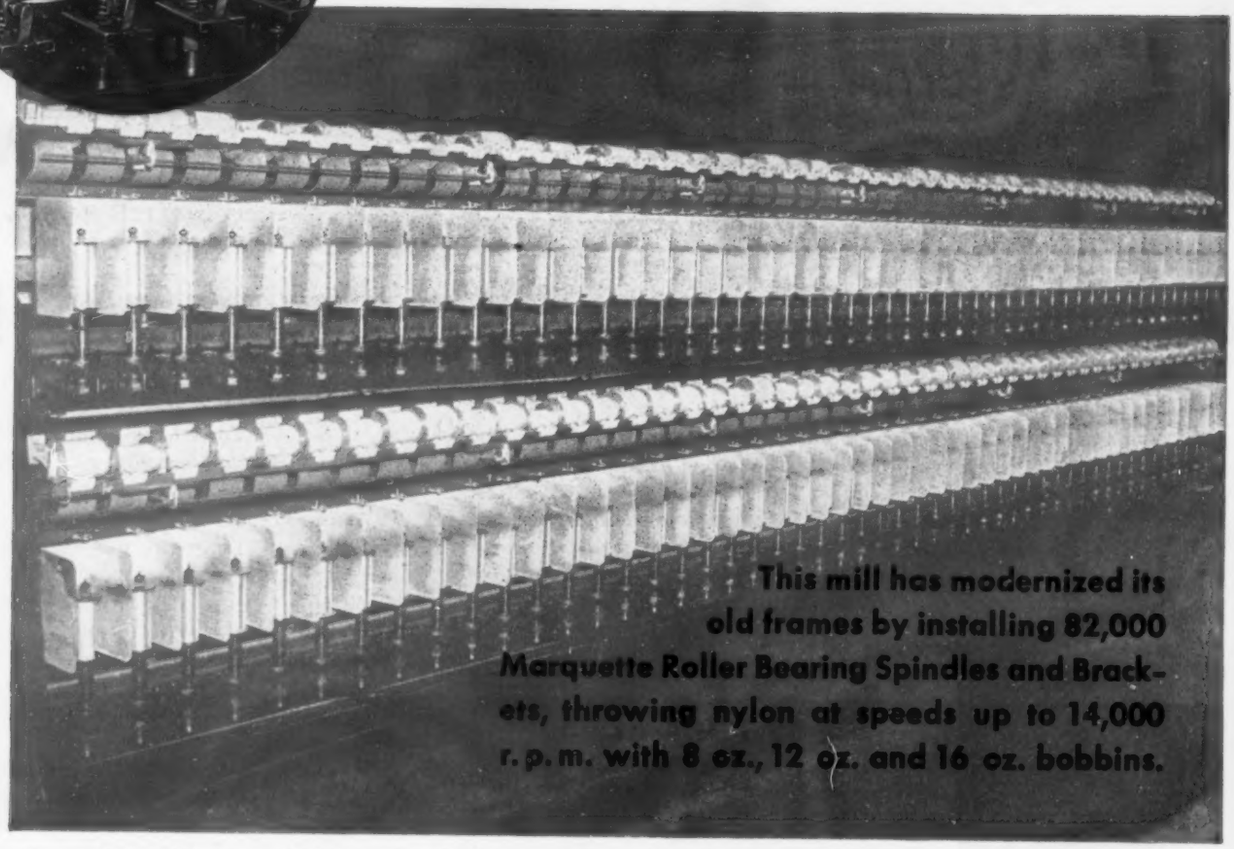
® FOAMGLAS INSULATION

. . . when you insulate with FOAMGLAS . . . you insulate for good!

Marquette ROLLER BEARING SPINDLES *with* FULL-FLOATING FOOTSTEP BEARING

For Cotton, Rayon, Nylon, Wool, Worsted





This mill has modernized its old frames by installing 82,000 Marquette Roller Bearing Spindles and Brackets, throwing nylon at speeds up to 14,000 r. p. m. with 8 oz., 12 oz. and 16 oz. bobbins.

By modernizing your old frames with Marquette Roller Bearing Spindles, you too can increase production by operating at higher speeds. Marquette Roller Bearing Spindles can be obtained by all frame builders. Ask our nearest sales office for illustrated catalog, or write direct.

PROTECTED BY U. S. AND FOREIGN PATENTS, AND PATENTS PENDING

The Marquette METAL PRODUCTS CO.

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSES
FUEL OIL INJECTORS • PRECISION PARTS AND ASSEMBLIES

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Vol. 113
No. 3

Textile Industries

MARCH
1949

Where Does "Industrial Relations" Begin?

THE READING of a memorandum prepared by the chief executive of one of the firms supplying the textile industry has recently been our privilege and our fortune. The memo was directed to the departmental heads and supervisors of his company. It was not written with the thought of publication in mind, but was dictated in the same manner as he would have spoken to the men in a group meeting, and as he probably has spoken to them on previous occasions.

The message may be termed a guide to good organization or the "principles of relations in a business." It is just as applicable to running a textile plant as it is to this executive's specialized business, and the substance of it may be used as an outline of principles for operating textile departments —or for guidance by the top executive.

Two related points in this memorandum especially caught our eyes, because they pertain directly to industrial relations in the textile industry, emphasized of late to us by men in responsible positions in manufacturing.

This is the "approach." And it is the approach as it concerns top management.

QUOTING in part from the memo: *Self-discipline is the most important and the most essential requirement of an executive or a department head in a business organization. Without self-discipline there can be no effective discipline of others.*

The author of the memo as an executive recognizes from the start that this is a quality which he himself must possess before he can expect it of his departmental heads or supervisors, and that they in turn must be self-disciplined before they can expect to be effective in guiding, disciplining, or securing the respect of others.

The foregoing statement is amplified with the caution to remember in disciplining other *free* men that *in the eyes of our God and our civilization the person being disciplined is your equal; and therefore he or she has the same feelings, sensibilities, and basic pride that you have.*

The failure to remember that the man with less authority than we possess may be subject to the same human emotions, is where many of our well-meaning industrial relations programs fall short.

Top management understands this simple formula, and supervisors have had it drilled home in more ways than one, but some executives forget when the time comes to contact the subordinate. The approach too often is based on unrelated circumstances or the mental attitude of the executive for which the subordinate is in no way responsible.

Only recently we have received some information on labor turnover in various textile plants, and in employee publications the subject is being aired to show the cost of turnover to both the mill and to the employee. In some instances the cost of losing and hiring an operative is tremendous.

We frequently come in contact with men in high positions who have left their former connections to secure *better working conditions.* When reasons for leaving are analyzed, they boil down to the "approach" by immediate superiors. The "approach" was emphasized when schooling supervisors, but it became a negative quantity when used by top management in contacting responsible executives in the chain of command.

If training an operative is expensive, is it less expensive to lose a qualified executive?

A GOOD industrial relations program is an asset to any business organization. Management has learned that supervisors are frontliners in putting the program across, and supervisor training programs have been instituted to the benefit of both management and employees.

But top management should never forget that good industrial relations begins with the first contact down the line, and is reflected through the entire organization. The chief executive has just as much responsibility to see that his relations with the manager or superintendent are up to par, as the departmental supervisor has in dealing with an operative.

The wrong approach, whether made by the chief executive to the plant superintendent or by the departmental supervisor to an operative, costs the mill unnecessary expense—either in reduced efficiency until the subordinate's reaction is normal, or in the training of a new employee.

NICKEL

Sheet, Strip, Rod, Wire, Tubing, Clad-steel, Castings.

Its practical cost astonishes users almost as much as its distinctive characteristics

CHEMICAL COMPOSITION

The nominal composition of commercially pure wrought Nickel is:

Nickel*	99.4%
Copper	0.1
Iron	0.15
Manganese	0.2
Silicon	0.05
Carbon	0.1

**Including cobalt*

PHYSICAL CONSTANTS

Specific Gravity	8.89
Density, lb. per cu. in.	0.321
Melting Point	2615-2635°F. / 1435-1445°C.
Specific Heat at (80-212°F.)	0.130
Heat Expansion Coefficient at (80-212°F.), per °F.	0.0000072
Thermal Conductivity at (80-212°F.), Btu/sq. ft./hr./°F./in.	420
Electrical Resistivity at 32°F., ohms/cir. mil. ft.	63
Temperature Coefficient of Electrical Resistivity per °F.	0.0022-0.0028
Modulus of Elasticity in tension, psi	30,000,000
in torsion, psi	11,000,000
Poisson's Ratio	0.31

MECHANICAL PROPERTIES

The following figures for Standard Cold Rolled Sheet are typical, though the figures will vary for different forms and tempers.

Tensile Strength	55,000-80,000 psi
Yield Strength (2% offset)	15,000-45,000 psi
Elongation in 2 in.	50-35%
Rockwell B Hardness	40-70

AVAILABLE FORMS

Wire — Bar — Plate — Pipe
Rod — Angles — Sheet — Strip
Seamless and Welded Tubing
Sand and Precision Castings
Clad-Steel Plate and Strip Welding Rods

It is a strange and interesting metal, Pure Nickel. A kin of both the base metals and the precious metals. Among all the elements, no other metal possesses its unique combination of so many different and uncommon properties.

- It is highly resistant to corrosives that destroy many other metals—alkalies, many acids, salts, organic compounds, fumes.
- It has mechanical properties like those of structural steel.
- Yet it is so ductile that it can be worked into the most intricate and delicate shapes that are practical in metal.
- It protects the purity of sensitive foods, beverages and pharmaceuticals against contamination.
- It often provides a faster rate of heat transfer than metals with equal heat conductivity.
- Its special electronic properties make it a standard metal for electronic uses.
- It offers rare electrical and magnetostrictive characteristics that often give theoretical ideas a birth of practical value.
- It can be exposed to temperatures ranging into yellow heat and even hotter in the absence of sulphur.
- At sub-zero temperatures its strength increases without change in ductility and toughness.
- It is a standard metal for the cladding of steel, and as a base for gold, palladium and silver-clad products.

And one of the most valuable of all its features is the fact that Pure Nickel is a practical metal at a practical price.

Does it stimulate an idea of how you may find an easy answer to a difficult problem?

Our technical bulletin "Engineering Properties of Nickel" gives the important facts you want. It's yours for the asking.

The International Nickel Company, Inc.

67 Wall Street, New York 5, N. Y.

NEWS in BRIEF

Japanese Textiles. The cotton textile industry in Japan is improving fast from the standpoint of worker efficiency and quality of product, but its expansion is being retarded by lack of markets for its goods, according to William de Min, president, Textile Export Association, who recently toured Far Eastern markets. (See Anglo-American conference report which covered discussions on Japanese textile situation; Tex. Ind., May '48, p 101.)

Rayon Production to be Increased. Domestic rayon and staple production capacity (1,162 million pounds Nov. '48) will show an 8% increase over the next 14 months, to reach 1,254 million pounds by the spring of 1950. Acetate will show largest gain.

To Protect Textile's Export Trade. Four major associations within the cotton textile industry have banded together to protect and develop the industry's export trade and to combat unfair restrictions on American textiles in overseas markets. Groups include American Cotton Manufacturers Association, Association of Cotton Textile Merchants of New York, The Cotton-Textile Institute, and the Textile Export Association of the U. S.

Relocation of Races Bill. Described by some as a facetious suggestion, but thought-provoking and pointed, was the bill introduced in Congress by Sen. Richard B. Russell (Ga.) to provide federal funds for the voluntary relocation of white and colored races in this country to bring about an equal ratio in population by races distribution, thereby enabling those who believe in the FEPC program to contribute to its success or failure.

Arbitrator Refuses Wage Increase. An arbitration decision between the Fall River Textile Manufacturers Association, the New Bedford Cotton Manufacturers Association, and the TWUA (CIO), during January Professor Douglass V. Brown of MIT ruled that no general increase in wages be granted at the time. The decision was based on change in the cost of living; productivity; and the immediate prospects of the industry.

With publicity being given to evidences that further inflation becomes a national hazard, union negotiators are reported as saying that emphasis will be placed on securing welfare funds, guaranteed wage payments, etc.

Mills Reduce Hours-Days Operations; Hold Shifts. The majority of textile plants which have found reduction of operating schedules necessary, have reduced the number of hours run per week, or days run per week; few have reduced the number of shifts operated, thereby retaining the shift organization intact.

Textile Commemorative Stamp Proposed. A bill introduced in Congress would provide for a special commemorative stamp in honor of 160 years of cotton textile manufacturing in the U. S. The Old Slater Mill was suggested for the stamp design.

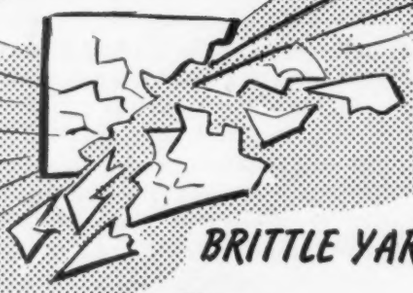
Foremen-Management Communication Poor. "Generally poor" is the report foremen give on the quality of their company's com-

1949 MAID OF COTTON (SUE HOWELL)

Sue Howell, 19-year-old University of California sophomore, is the 1949 Maid of Cotton. Following her month's training under the direction of Candy Jones in New York, Maid Sue begins her tour of the U. S., Paris, Manchester, and London. She is the first Maid of Cotton from the Far West.

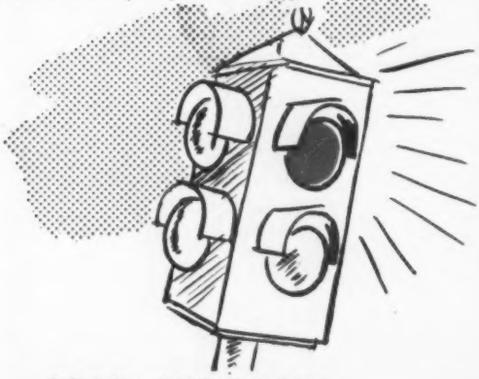
WHATEVER YOUR COTTON SIZING PROBLEM

SOFT WARP



BRITTLE YARNS

EXCESSIVE SHEDDING



LOOM STOPPAGE

Caro-Gant

REG. U. S. PAT. OFF.

WILL SOLVE IT!

No matter what your slashing room problem, the answer is Caro-Gant—the modern, scientific warp dressing. You can eliminate soft warps, brittle yarns, excessive shedding, unnecessary loom stoppage and profit reducing seconds with Caro-Gant—the perfect sizing.

Caro-Gant, the original 100% active warp dressing, contains no water or metallic salts. It is economical because one (1) barrel of Caro-Gant does the work of three (3) barrels of ordinary sizing. In addition, it prolongs the life of slasher blankets and insures minimum shedding and high weaving efficiency. Caro-Gant is the standby of leading mills everywhere.

THE HART PRODUCTS CORPORATION · 1440 Broadway, New York 18, N. Y.

Hartex Products:

Rayon Oils & Sizes	Conditioning Agents	Cationic Softeners
Nylon Oils & Sizes	Scrooping Agents	Cotton Warp Dressings
Kier Bleaching Oils	Splashproof Compounds	Wetting-Out Agents
Finishing Oils	Delustrants	Weighting Agents
Synthetic Detergents	Leveling Agents	Mercerizing Penetrants

Hart Products

based on research

munications program with foremen, according to a survey by the Labor Relations Institute. Foremen agreed that companies do tell them about working rules and regulations, but fail to post them on new developments in personnel policies, trends in business and future outlook, and fail to provide foremen training in handling employee relations.

Government Cost Now and Then! In 1937 it took all of the income of all of the people in Pennsylvania and Missouri to pay the cost of federal government for one year. In 1947 it took all of the income of all of the people in 25 states to pay the cost for one year.—DeWitt Emery, president, National Small Business Men's Association.

Government Personnel Cost. The total sick and annual leave accumulations in the federal government represent a potential obligation estimated at over a billion dollars, according to a survey by Senator Joseph L. Ball. Federal employees who avail themselves of the maximum annual leave of 26 days, sick leave of 15 days, holidays totaling eight days, plus 104 Saturdays and Sundays, work 212 days a year. The federal employee is permitted to accumulate sick and annual leave over a period of years, which is said sometimes to render it less costly for a department to retain an incompetent employee than to discharge and replace him.

Sheet and Pillowcase Standards. National standards for sheets and pillowcases have been made available following approval by a majority of manufacturer, retailer, and consumer interest groups under the procedures of the American Standards Association.

Photographic Reproduction on Textiles. Foto-Fab, the new process of photographic reproduction on textiles, is now geared for volume production, according to A. M. Perlman, Inc. Foto-Fab prints by means of light passing through a negative onto sensitized cloth, retaining the half-tones of photography, with third dimensional quality.

Sheep Decrease. Sheep numbers in U. S. are the lowest since the Dept. of Agriculture began keeping records in 1867. At present there are barely three-fifths of the 1942 number.

Vinyl Resin in Carpets. Vinyon HH resin staple, manufactured by American Viscose Corporation, is being used in a new carved broadloom. More expensive than wool, the resin fibers are less attractive to moths, mildew and fungi, will not burn, and will not absorb water.

Redman Licenses. License agreements for use of the Redman process for shrinking knitted textiles have been given approval; several mills have signed for licenses. Proctor & Schwartz will build commercial machines.

Clarify Depreciation on Annual Reports. Corporation annual reports should make clear to stockholders and the public that provisions for depreciation and replacement of productive equipment must rise in proportion to inflated prices if the company is to remain financially sound.—Wm. J. Kelly, president, Machinery and Allied Products Institute.

Executive's Retirement Income. Faced with the problem of trained and highly paid executives leaving for jobs with companies which pay less at present but which provide for retirement income in later years, some mills are studying systems which offer to management and key men inducements of security for the future as well as for today.

Clothing Survey. The U. S. Dept. of Agriculture is conducting a sur-

"HISTORY OF COTTON TEXTILES" EDUCATIONAL STRIP AVAILABLE

The History of Cotton Textiles is a matted educational strip drawn by Andrew L. Petersen. It is available for use in textile communities without cost, and can be used in widths of five columns or two. Both employee publications and newspapers of general circulation may secure mats on the same basis.

Twenty-three strips are available, shipped free, from Textile Information Service, Press Division, 49 West 46th St., New York 19, N. Y.

THE HISTORY OF COTTON TEXTILES
No. 3 of a Series
By ANDREW L. PETERSEN
THE story of Samuel Slater ranks as one of the greatest romances of American industry. Born in England, he served his apprenticeship in one of that country's newest cotton mills and learned the secrets of yarn manufacture. Defying the law which forbade technicians to leave England, he made his way to America. Here he offered his services to Moses Brown, Rhode Island manufacturer, confident that he could reproduce the vital machinery.
SLATER AS AN ENGLISH APPRENTICE, WAS SCHOOLED IN THE NEW ARKWRIGHT METHOD OF MANUFACTURING COTTON YARNS.
NEARING THE END OF HIS SIX-YEAR APPRENTICESHIP, SLATER MEMORIZED HOW TEXTILE MACHINES WERE MADE.
IN A FARMHAND'S DISGUISE, SLATER SLIPPED ABOARD AN AMERICAN-BOUND VESSEL.
MOSES BROWN OFFERED PARTNERSHIP TO SLATER, WHO VOWS TO TRANSFORM BROWN'S RUN-DOWN MILL.

Maguire Service to Manufacturers and Selling Agents eliminates credit losses - makes cash available as shipments are made and permits larger sales volume without increased capital investment.

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FACTORS

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Check Credits · Cash Sales · Absorb Credit Losses

vey to secure up-to-date information concerning family purchases and use of clothing, believing that the information obtained will assist clothing manufacturers and retailers to make better plans for production and sales.

Straight-Forward Industrial Relations. The General Electric Company has adopted the straight-forward industrial relations policy of not blaming employee dissatisfaction on outside influences; setting out to make leadership within the company better, GE has instituted the program of giving all facts to the employees and to the public, thereby combining its industrial relations program with its public relations program.

Integration in South Carolina. The South Carolina textile industry is no longer controlled by isolated individual mill owners, says Solomon Barkin of TWUA (CIO) in a 40-page paper on the integration movement in the southern textile industry. According to figures offered by Mr. Barkin, fifteen interests employ 88,733 persons out of the 133,408 employed in the segment of the industry studied; they have 67% of the employees, 65% of the spindles, 68% of the looms; and operate 106 of the 227 mills in the state. The survey further offers that the following are part of vertically integrated organizations in South Carolina: 88% of the employees; 80% of the mills; 88% of the looms; 87% of the spindles. The opinion has been expressed in textile circles that interpretations and conclusions by Mr. Barkin are heavily slanted in the direction of union propaganda.

Voids Excess Wage Tax. Alabama's excess wages act of 1943 has been declared unconstitutional by Circuit Judge Walter B. Jones of Montgomery. The tax raised the payroll taxes of large companies from 1.5 to 2.7%. Judge Jones ruled that the act was void on three counts, and he ordered the State Industrial Relations Department to refund $2,960 to the West Boylston Manufacturing Company, a textile concern located near Montgomery.

"Textile Industries" staff photo

EMPLOYEES RECOGNIZED FOR FIFTY YEARS' SERVICE

Harry Atherton, president of Palmetto Cotton Mills, Palmetto, Ga., presents service pins to Elvie Harcourt and Garland Harcourt (left rear) for fifty years of service with the mill. The two fifty-year veterans were given bonus checks as a token of appreciation for their service records.

Other employees received service pins for 40 years, 30 years, 20 years, and 10 years of service. The awards were made at a banquet, on January 22, commemorating the anniversaries and in recognition of the part employees play in the successful operation of the mill.

Czechs Spur Silk Output. Five tons of silk worm cocoons are expected to be bred in Czechoslovakia the coming year against three tons in 1947. Two special silk research institutes are being established for studying their silk production. Plans are also being made for a mill to use Czech silk production.

In Accord on Screw Threads. Representing the culmination of 30 years of effort among three nations, delegates and representatives from government and industry of Canada, the United Kingdom, and the United States signed an accord on unification of the American and British standard systems of screw threads.

Drop in Brazilian Cotton Exports Expected. Brazilian cotton exports during the next few years are not expected to be as high as during the past two seasons, according to the U. S. Department of Agriculture. The statement was based on a survey conducted under the Research and Marketing Act.

The 1949 crop may show some increase over production of the last few seasons. However, Brazil's cotton output is not soon expected to regain prewar levels (about 2 million bales).

Fiberglas-Plastic Laminated Parachute Pack. Glass fibers and plastic resins are being combined by General Textile Mills, Inc., at its Carbondale, Pa., plant, to make

Welcome the man who presents this card. He's ready and anxious to help you increase consumer good will by protecting your product against the hazards of shipping—and to help you increase sales through better packaging.

GAYLORD CONTAINER CORPORATION
General Offices: SAINT LOUIS

Corrugated and Solid Fibre Boxes • Folding Cartons • Kraft Grocery Bags and Sacks • Kraft Paper and Specialti

196

a high-strength, light-weight parachute pack for the Bureau of Ordnance of the Department of the Navy. The glass used in fabricating the parachute pack is a newly-developed Fiberglas mat. The resin used is of a polyester type made from styrene. The combination of glass fibers and resin provides a molded material that is not affected by moisture or distorted by extremes of heat and cold, and that possesses great impact strength.

Foundation Garment News. Foundation garment sales at the retail level reached an all-time high of approximately $424,000,000 in 1948, as compared with about $396,000,000 the preceding year. Against this background, manufacturers generally foresee good business in 1949 as based on these considerations:

1. There is a favorable fashion trend. The Empire silhouette, with its emphasis on bust and waist lines, stimulates additional consumer interest in the products of this industry.

2. A greater percentage of women now wear foundation garments than at any time in history.

Increase in Manufacturers' Agents. The last two U. S. census reports have shown a steady increase in number of manufacturers' agents and in the volume of business handled by them.

Spindles in Marshall-Aid Countries. The 19 Marshall-aid countries now have 55 million spindles in place and their programs call for the installation of an additional 15 million, an increase of 27.3 per cent, according to reports. Almost all of these countries have been traditional textile exporters.

Textile Professors Hear Own Lectures. A tape recording machine is located in class rooms at the textile school of N. C. State College, and lectures by instructors are recorded, to be played back later. Instructors not only can listen to what they say, but how they say it. Improvement in instruction is the purpose.

Lingerie Fabric of Cordura. The first lingerie fabric woven completely of Cordura rayon yarn is said to achieve unusual durability and have good texture. Cordura is a high-tenacity yarn. The yarn was originally developed in larger filaments for heavy-duty automobile tire cord. In lingerie fabric it is said to give a pleasing, dull luster, and a soft, sleek touch.

No Definition for "Free Enterprise." An attempt by DeWitt Emery, president of the National Small Business Men's Association, Inc., to locate a definition of the term "Free Enterprise" revealed that no definition was available. Tried were encyclopedias, half a dozen reference books, three dictionaries, the Chicago public library, and other sources. Mr. Emery wrote his own: "Free Enterprise is, first, the right of each individual to decide for himself what his occupation shall be and to change occupations whenever he wishes; and, second, the private ownership and management of the tools and other means of production and distribution."

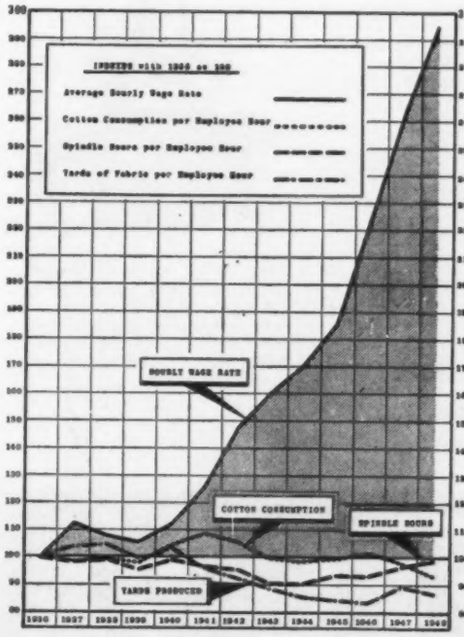
ITT Scholarship. The Textile Waste Exchange has provided a scholarship at the Institute of Textile Technology, Charlottesville, Va. A check for $1325 was sent for this purpose.

RISE IN WAGES CONTRASTS WITH TEXTILE PRODUCTIVITY

Hourly wage rates and production in the cotton textile industry, with man-hour production measured in terms of cotton consumption, spindle hours, and fabric output are shown. The sharp rise in wages is in marked contrast to the trend in the industry's productivity, according to a survey by the Cotton-Textile Institute.

Measured by cotton consumption, yards of cloth, or spindle hours, the productivity per man-hour for the industry as a whole is not only below the 1939 level, but also below that of 1936.

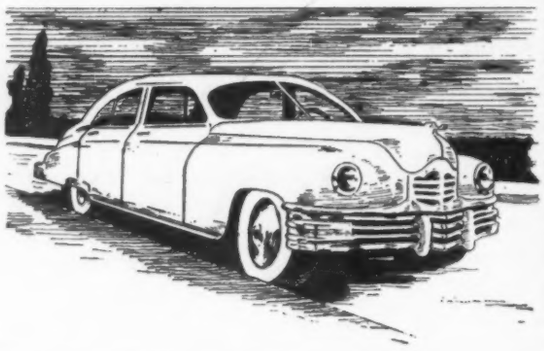
The disparity between wage and productivity trends is a measure of the extent to which unit labor costs have increased and of the gigantic cost problem which must be solved if the industry is to maintain its competitive position, noted the survey.



Note: Man-hour ratios should not be confused with labor efficiency. The productivity of an industry does not depend solely on employee efforts or skill, but a number of factors including the character of the equipment, the efficiency of management, the type of products manufactured, and the length of the runs.

Also, none of these yardsticks taken alone provides a precise measurement of the industry's productivity. Pounds of cotton consumed per man-hour vary with the weight of the yarn produced, etc.

Compiled from reports of U. S. Depts. of Agriculture, Labor, and Commerce.



1. Is this an au-to-mo-bile?
Yes, this is an au-to-mo-bile.
It is a fine au-to-mo-bile and

POWELL VALVES

helped to make every part of it.

American Industry has gone a long way since McGuffey compiled his First Reader in 1836. But Powell Valves have matched every step in its progress.

Literally, Powell Valves help to make everything that goes into the modern automobile. Because, whether it be motor, transmission, chassis, body, plastics, finishes, tires, anti-freeze, battery, gasoline or any other processed item, there are Powell Valves exactly suited to control the flow of all media used in their production.

This automobile merely illustrates the completeness of the Powell Line. The important point is that, no matter what *your* product may be, there are Powell Valves especially adapted for each and every one of your flow control services.

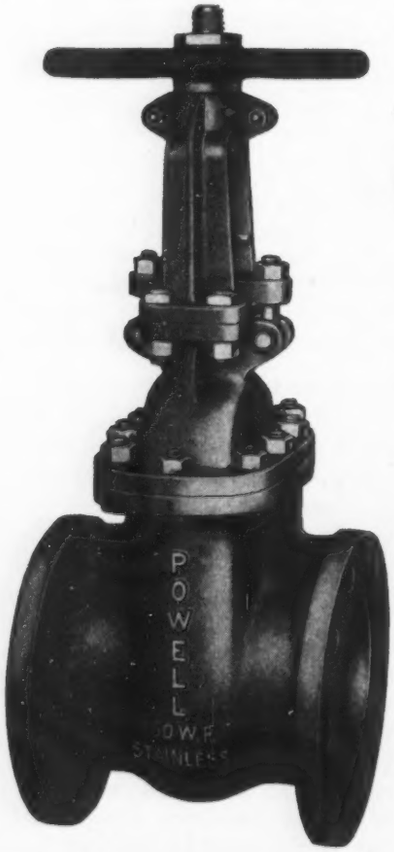


Fig. 2453-G—Large 150-pound Stainless Steel Gate Valve. Made in sizes 5" to 30", inclusive. Has bolted flanged yoke-bonnet, outside screw rising stem and tapered solid wedge.

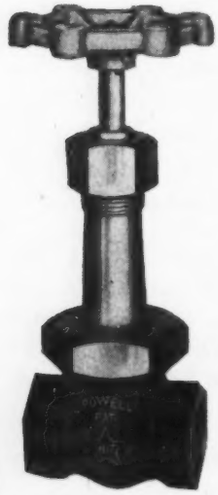


Fig. 375—200-pound Bronze Gate Valve. Screwed ends, union bonnet, inside screw rising stem and renewable "Powellium" wear-resisting nickel-bronze disc.

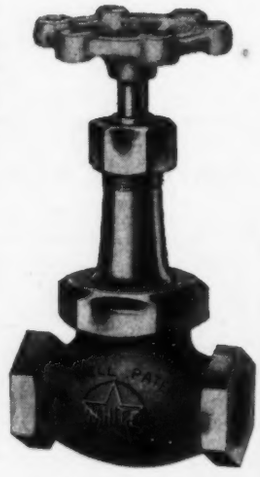


Fig. 1708 — 200-pound Bronze Globe Valve with screwed ends, union bonnet, renewable, specially heat treated stainless steel seat and regrindable, renewable wear-resisting "Powellium" nickel-bronze disc.

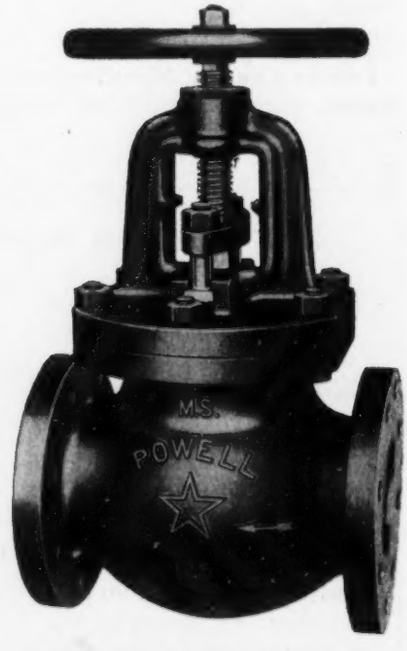


Fig. 241—Large 125-pound Iron Body Bronze Mounted Globe Valve. Made in sizes 2" to 16", inclusive. Has outside screw rising stem, bolted flanged yoke and regrindable, renewable bronze seat and disc.

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POWELL VALVES

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

FEARS that the industry might be about to go through another round of wage increases have now been quieted with the announcement of the arbitrator's decision in the New England case. The union, you will recall, had asked the Fall River-New Bedford mills for an increase of 10 cents an hour, and when this was refused the case went to arbitration. Several weeks ago the arbitrator denied the union's petition, and thus it is felt that for the time being at least wages will remain stable.

Most manufacturers like to see their employees earn the highest possible wage, because in spite of propaganda from the other side of the street most textile executives are that sort of men. Too, they realize that the higher the wages are in all industry, the more money people will have to purchase textile goods, thereby making it possible to maintain more steady production schedules.

However, and it's a mighty BIG "however," nearly everyone realizes today that wages can't go up any more unless the Worth Street market gets much stronger than it has been. Prices for the basic cotton constructions have been hovering around the last O.P.A. levels which were in existence in October, 1946, when the late and unlamented Office of Price Administration was in its death throes, and when American cotton goods workers were earning an average of around 90 cents an hour. Today prices are back where they were at that time, but average hourly earnings have gone up to something like $1.13 an hour, an increase of more than 25 per cent.

To those who have to meet payrolls, and satisfy boards of directors and stockholders, and who at the same time have to listen to the unhappy laments coming from Worth Street, there is only one answer: if wages go any higher, something has got to break.

In the South, where in recent years the mills have followed the wage pattern set in New England, it had already begun to appear that this time the story might be different if the 10-cents-an-hour request had been granted. Many manufacturers were already considering whether or not they were justified in continuing full-scale operations, and another wage request would undoubtedly have tipped the scales with many of them.

Hands Across the Sea

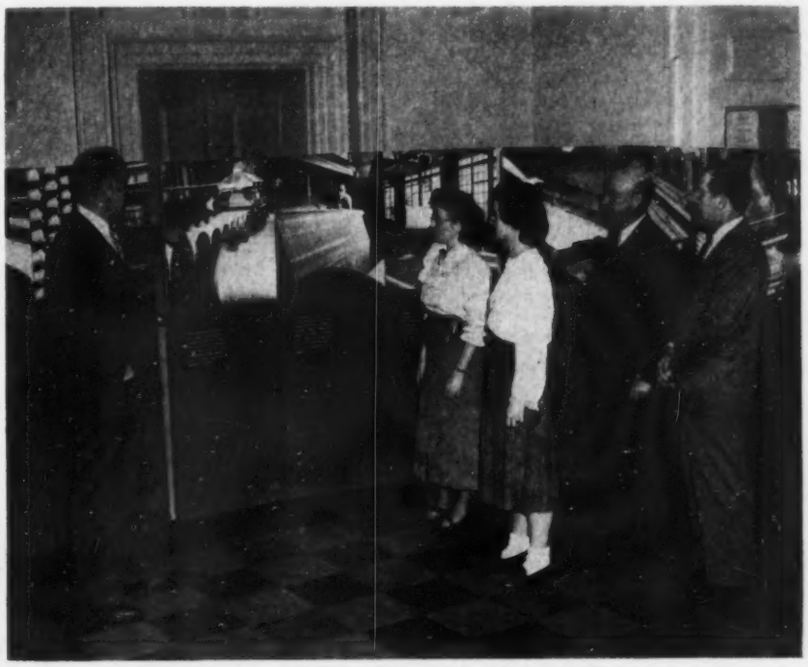
Since the war the textile industry has been more internationally minded than ever before in its history. As evidence of this fact, you will recall that during 1948 textile missions went to both Japan and England, and increased emphasis was placed upon cooperating with the Army in its efforts to dispose of the production of mills in conquered nations.

Therefore, it was with particular interest that the industry viewed the recent visit to this country of Sir Raymond Streat, chairman of the Cotton Board of Great Britain, and of Mr. James Broatch, secretary of the Board. Sir Raymond

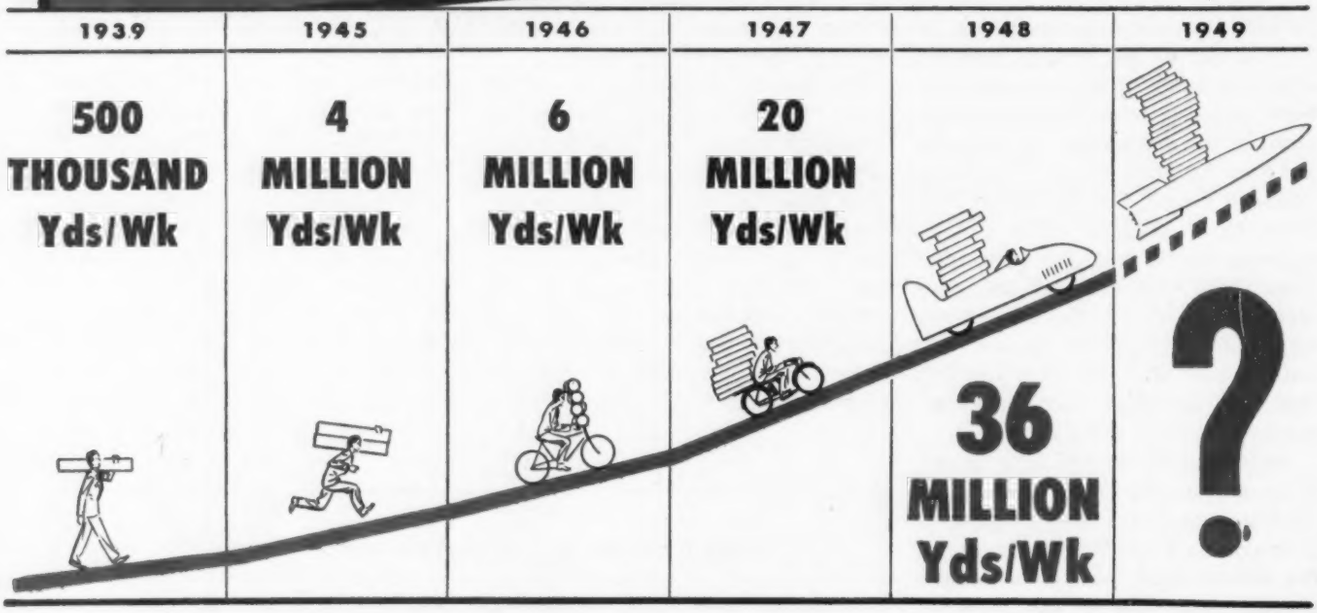
PUBLIC GETS ACQUAINTED WITH TEXTILES

Mister and Miss American Public can get close-up glimpses of the cotton textile industry by viewing its traveling photo exhibit. Graphic highlights of the industry's economic and social contributions to the nation are depicted as shown below.

Pictures show modern mills, research laboratories, textile machinery; and employees at work, home, and play. In this picture the exhibit is viewed by the public at Colby College.



OVER 7200% INCREASE
FROM 1939 TO 1949
and still climbing!



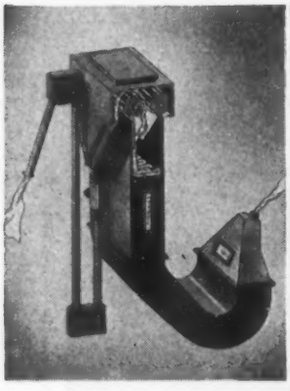
NOW 36,000,000 YARDS PER WEEK BLEACHED IN DU PONT CONTINUOUS PEROXIDE SYSTEMS

That's the latest total production figure from present installations. And, as more and more mills change to this fast, economical bleaching system, the figure will grow larger and larger. Right now continuous bleach construction is underway in more mills.

That's because the Du Pont System is gaining increasing recognition as the right answer to modern bleaching needs. It's continuous. It's speedy. It permits quality production. It's most economical. It's adaptable to mill requirements.

We'd like to tell you more about how the Du Pont Rope and Open-width System can fit your bleaching needs. Du Pont bleaching experts will be pleased to work with you, to survey your plant, study your requirements, help you select the proper equipment and assist you in many other ways. E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

Tune in to Du Pont "Cavalcade of America" Monday nights—NBC coast to coast

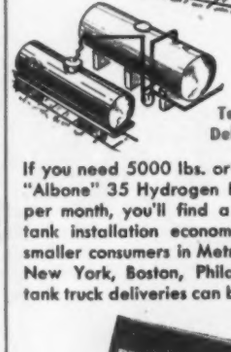


HIGH-SPEED BLEACHING BOX FEATURES:

1. Higher bleaching speeds—lowers cost of investment per production unit.
2. Improved piling mechanism—positive pulling draw reels remove cloth faster than previous designs.
3. Increased capacity—more cloth can be handled without increase in the size of the equipment.
4. Reduction in floor space requirements—overall length of J-Box has been reduced by 25% or more.

For GREATEST ECONOMY, CONSIDER:

Tank Storage at the Mill



Tank Car Deliveries

If you need 5000 lbs. or more of "Albone" 35 Hydrogen Peroxide per month, you'll find a storage tank installation economical. For smaller consumers in Metropolitan New York, Boston, Philadelphia, tank truck deliveries can be made.

SEND FOR THIS BOOK

It shows typical continuous bleach layouts designed to fit the requirements of various plants. For a copy, just write E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Del.

DU PONT CONTINUOUS PEROXIDE BLEACHING

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

spoke briefly in New York at a luncheon honoring him, and made a major address in Charlotte, N. C., at a banquet tendered him by the American Cotton Manufacturers Association through the chairman of its board, Harvey W. Moore.

While it is known that Sir Raymond proposed privately to industry leaders that the Japanese situation be reconsidered through a joint Anglo-American mission to Tokyo, no announcement has yet been made as to the outcome of these parleys. However, in Sir Raymond's speech in Charlotte, as indicated by the manuscript distributed to the press, he stated: "It is the hope of the British cotton industry that in the early future the question of the role of the Japanese industry in world trade will be realistically examined and that a policy may be followed which will secure that the sale of Japanese goods shall not prevent the U. S. and U. K. industries from gaining on merit the satisfactory export trade which is necessary for their well-being. . . . What matters is how that trade is done, where it is done and what size it runs to."

No one would question Sir Raymond's right to protect the interests of his country. In fact, in his position it is his duty, as it would be the duty of this country's association executives to protect America's interests. But to one who reads the quoted statements above with a jaundiced eye, they are reminiscent of the many share-the-wealth programs which perennially rear their ugly heads. It will be remembered, of course, that the share-the-wealth plans are always proposed by those who don't have anything to share.

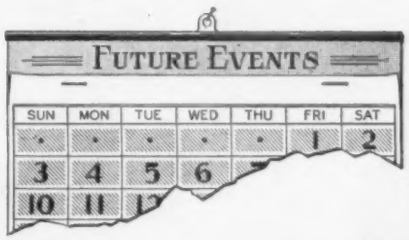
The American mission which went to Japan last spring put across a program which insured that, to the greatest possible extent at that time, Japanese textile goods would be sold in markets *other than* American. It is rather obvious that the English would like to amend that plan so that Nipponese textiles would be sold in markets other than those of *Great Britain* and America.

If this assumption is correct, it is difficult to see just what our own industry might have to gain. The British might propose opening some of their markets to us, but whether or not their socialistically-inclined government would listen to any such idea is highly doubtful. In any event, British cotton goods wages are currently less than half our own and whether or not we could compete with them on such a basis would be still another question. It is true that English mills are operating on a single shift of 45 hours per week, and with equipment which in this country would be considered obsolete; but we have no guarantee that such conditions will continue.

While American textile manufacturers are not unaware of their responsibilities in the Parliament of Man, they must at the same time keep ever before them their responsibilities to their employees and to the American nation. Cooperation is a splendid word, but we must remember that the British have gained the reputation of being the world's greatest diplomats, or, expressed another way, the world's greatest horse-traders. Historically, American diplomats usually have their shirts taken off their backs by their English counterparts.

With the complex world situation before us, it is realized that this question and others like it must be approached with humility and with an awareness of the ignorance of the individual writer. Nevertheless, the fact standing out crystal-clear is that any American group dealing with the British on the question of Japanese textiles must have its wits about it and must have constantly before it the interests of the American textile employee and the American textile manufacturer.

The late Will Rogers sometimes used to express the thought that foreign diplomats were seldom trying to do anything *for* us, but instead were usually trying to do something *to* us. That may be a cynical approach, but it is a thought worth keeping in mind in the weeks and months ahead.



March 28-April 1—National meeting, **American Chemical Society**, Fairmont Hotel, San Francisco, Calif.

March 31-April 2—Annual convention, **American Cotton Manufacturers Association**, Palm Beach-Biltmore Hotel, Palm Beach, Fla.

April 7—Annual meeting, **National Knitted Outerwear Association**, Waldorf-Astoria Hotel, New York, N. Y.

April 14-15—Annual meeting, **Alabama Cotton Manufacturers Association**, Hotel Buena Vista, Biloxi, Miss.

April 25—Annual meeting, **National Association of Hosiery Manufacturers**, Hotel Claridge, Atlantic City, N. J.

April 25-26—Annual **Hosiery Industry Conference**, Hotel Claridge, Atlantic City, N. J.

April 25-28—Fourth **Southern Machinery and Metals Exposition**, Municipal Auditorium, Atlanta, Ga.

April 25-29—**Knitting Arts Exhibition**, Atlantic City, N. J.

May 2-7—**International Textile Industries Exposition**, Grand Central Palace, New York, N. Y.

May 2-13—**British Industries Fair**, Olympia, London, and Castle Bromwich, Birmingham, England.

May 9-13—Fourth annual **National Textile Seminar**, Shawnee Inn, Shawnee-on-the-Delaware, Pa.

May 9-14—**National Cotton Week.**

May 12-14—Annual outing, **Carolina Yarn Association**, Carolina Inn, Pinehurst, N. C.

May 26-28—Annual convention, **Tufted Textile Manufacturers Association**, Atlanta Biltmore Hotel, Atlanta, Ga.

June 6-10—**Textile Wet Processing Equipment and Supplies Exposition**, 71st Regiment Armory, 34th St. and Park Ave., New York, N. Y. (Note: dates for this exposition were previously announced as March 21-25.)

June 16-18—Annual convention, **Southern Textile Association**, Mayview Manor, Blowing Rock, N. C.

July 28-30—**Cotton Research Congress**, Dallas, Texas.

Oct. 12-22—**"Textile Recorder" Machinery, Accessories, Yarns and Fabrics Exhibition**, Belle Vue, Manchester, England.

October 13-16 — National convention, **American Association of Textile Chemists and Colorists**, Chalfonte-Haddon Hall, Atlantic City, N. J.

Nov. 3—Annual meeting, **Cotton-Textile Institute**, New York, N. Y.

1950

May 8-12—**American Textile Machinery Exhibition**, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J.

talking oils

What a salesman says is *plausible,* but what the product itself says, in years of use, is *convincing.* Standard Oil lubricants have been talking quality convincingly in textile mills throughout the South for over sixty years. The pioneer in the field of specialized lubricants for the textile industry, Standard Oil lubricants have been constantly improved through research and careful attention to the changing needs of the textile industry, and are still first in point of popularity. Wherever there are moving parts—from breaker room to weaving shed—there are special types of Standard Oil lubricants to afford maximum protection. Whatever your needs, you'll find it profitable to consult with a Standard Oil representative *first* regarding your requirements.

STANDARD OIL COMPANY INCORPORATED IN KENTUCKY

SHORTS and REMNANTS

The New Section

Hearty thanks to those of you who have written us concerning the new color section which precedes the technical articles in each issue. The new section was started with the January issue, and thus far the response has been most favorable and encouraging.

This section will continue to brief the news for readers, and to post them on opinions of the news as it affects textiles.

◆

Complete Copies of October

Please mail to Callaway Mills Company, Elm City Plant, LaGrange, Georgia, attention of Mr. H. T. Mahaffey, Superintendent, 10 copies of your October, 1948, issue."

J. T. BRASWELL, JR.
Callaway Mills Company
USEO Division
Purchasing Department

(A telephone call determined that the article desired was the 19-page story of Ben Crawford's "Waste Reduction and Control." Difficult to supply complete copies, but reprints were delivered the next day.)

◆

Finishing Article

"Please send us a reprint of the series of two articles entitled 'Crease Resistant Finishes' . . . in September and October 1948 issues of Textile Industries."

W. T. CLARKE
Librarian
United Merchants Laboratories, Inc.
New York City

◆

Wool Oil Emulsion

". . . interesting article on the automatic application of emulsion to wool . . . possible to give us list of suppliers of this automatic control equipment?"

BENJAMIN K. SHARP
Superintendent
Milledgeville (Ga.) Mills

◆

Enjoys TI

"I enjoy reading your magazine inasmuch as it has so many good articles in it, and several times I have used some of its information to good purposes."

H. R. TREIBER
Moniteau Mills, Inc.
California, Missouri

◆

Planimeter Use

"We are most interested in the staff-prepared article 'The Evaluation of Evenness Tests' in the January 1949 issue. At the present time, we contemplate using a similar system for certain types of nylon yarn. . . . be kind enough to give us any information on the planimeter instrument mentioned in the article."

DAVID L. JUDSON
Engineering & Standards Dept.
Mock, Judson, Voehringer Co.
Greensboro, N. C.

◆

"The Investor"

"If reprints are available, we would like to request the following: 10 reprints of the article 'The Investor'."

R. R. MENTI
Textile Division
U. S. Rubber Co.
New York City

◆

French Comb

". . . of Lafayette Worsted Spinning Company has requested a copy of the article by F. A. Lewis dealing with the French comb, which appeared in TEXTILE INDUSTRIES . . . if you can send him tear sheets."

JULIAN S. JACOBS
Director, Dept. of Publications
Textile Research Institute, Inc.

◆

Goat Stamp! Textile Stamp?

". . . that a postage stamp is being proposed to commemorate the Centennial Angora Goat here in the U. S. Why can't we have a stamp commemorating the fine growth of the cotton textile industry?"

VICE-PRESIDENT

(Proposal made; stamp may be on the way. See page 83 this issue.)

No! No! Not that one. The OTHER one!

◆

"Cotton Warp Sizing"

"I am very much interested in receiving the complete set of articles on 'Cotton Warp Sizing' by Dr. Seydel."

(This series of articles is concluded in the current issue with the presentation of a complete bibliography on the subject. Response to this series has been tremendous. It will be reprinted in book form. See page 100 for details.)

◆

"Draft Distribution"

". . . in your June '48 issue . . . article 'Effect of Draft Distribution' by Louis Fiori. This is very much in line with some studies we have been making. Please send us six reprints."

(Reprints available from Southern Regional Research Laboratory, New Orleans, La.)

◆

Perfumed Fabric

". . . interested in finding the location of Elliott Springs Textile Factory . . . understand they make a type of perfumed fabric. . . ."

JOHN E. CROUL, JR.
Petaluma, Calif.

(So we've heard, read, and have yet to detect.)

◆

55 Articles from '48 TI

A recent letter from one of our good subscribers indicated a new use for our annual Index of articles for the year. He had checked fifty-five (55) articles in the Index, returned it to us, with the request that we supply those he had checked (did not need everything)! We like to help everyone, but all articles in TI are not reprinted (even if they are that good), so a request like this is difficult to handle.

(Our suggestion: Subscribe to TI and save your copies. We shall supply reprints when available, or tear sheets of articles when we can.)

◆

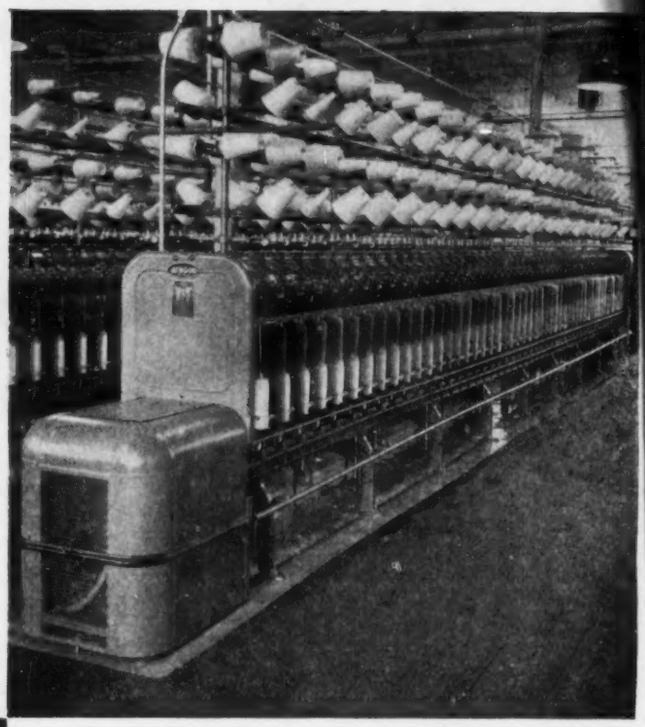
"Crease Resistant Finishes"

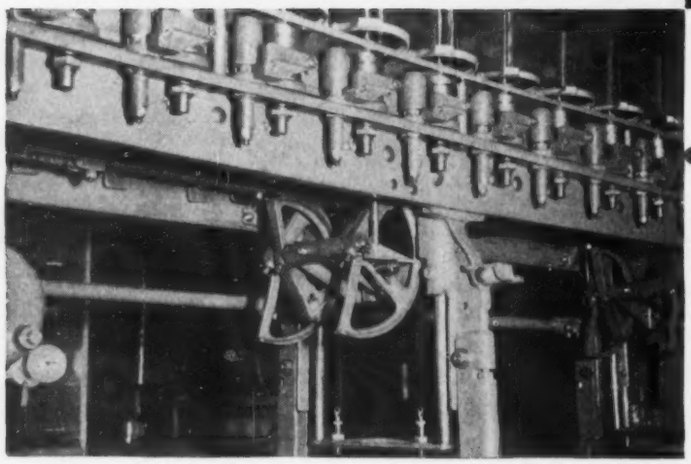
". . . reprint of the complete article entitled 'Crease Resistant Finishes,' as published in September and October 1948 issues. If reprints are not available, tear-sheets would be most acceptable."

A. M. TENNEY ASSOCIATES, INC.
10 East 40th St.
New York 16, N. Y.

It Twists

NATURAL AND SYNTHETIC YARNS





The sturdy lifter rods, designed with oilless metal bushings, assure smooth ring rail traverse and require a minimum of maintenance. One long-wearing endless, lapless belt for all spindles, eliminates sewing or tying of tapes. Automatic stop motion for each end and ply prevents roller laps and allows piecing up of single ends. Knee brakes are eliminated.

The Atwood Model 10 Ring Twister is a completely modern machine, sturdily constructed, and designed to produce plied yarns of cotton, woolen and worsted; spun rayon, filament rayon, nylon and combination yarns. Around a basic design that has proved highly successful over the years, the machine has been redesigned for smoother running, reduction in maintenance, and greater ease of operation.

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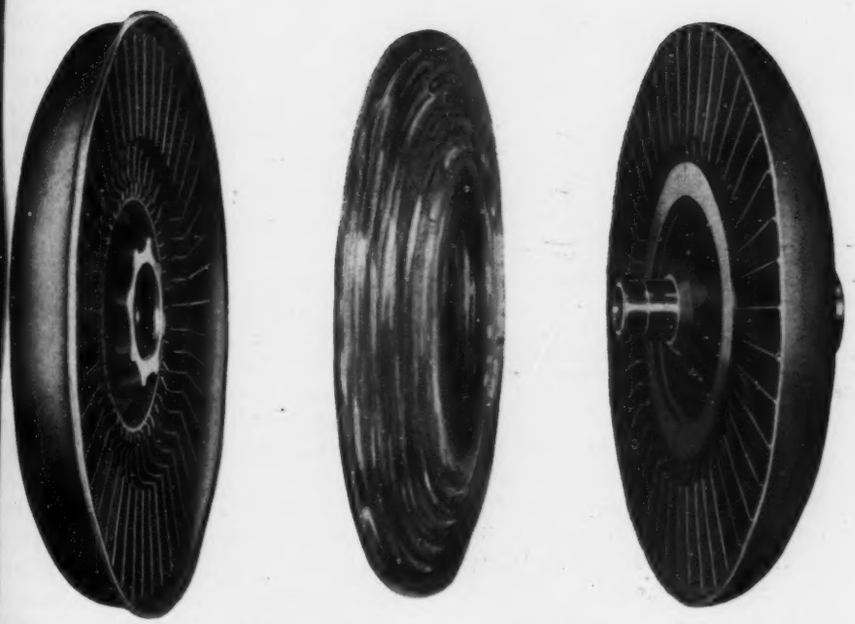


Photo Courtesy, American Blower Corp.

Fluid Drives for Textile Machinery

Staff Prepared

EXCLUSIVE

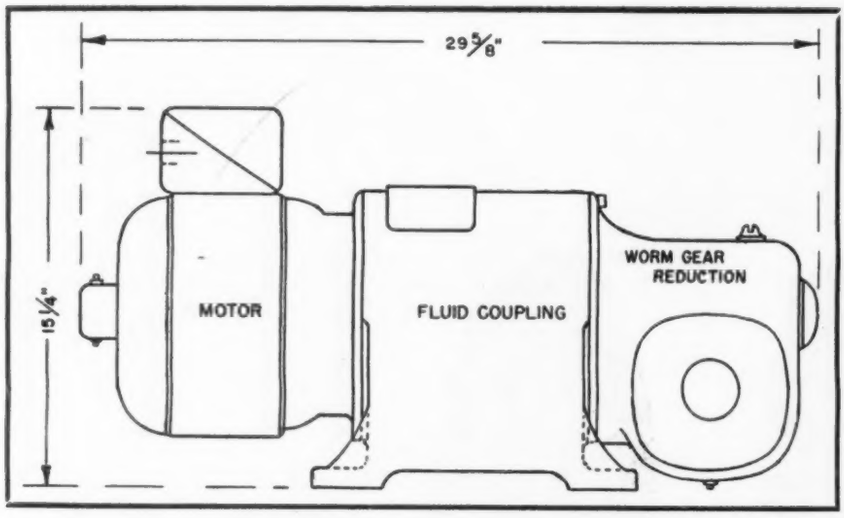
Power transmission through fluid drives offers many advantages in a number of important applications.

TEXTILE MILLS, along with industry in general, are taking a new and active interest in the fluid drive. These power transmission mechanisms are theoretically applicable wherever smooth, low torque starting is advantageous. The most obvious applications are on pickers, cards, roving frames, spinning frames, and winders. Such drives could be used on looms, but this appears to be too expensive for the advantages gained.

In the bleaching and finishing plants, the drive might work well on calenders, dry cans, dyeing machinery, mangles, soapers, nappers, or tenter frames. Wherever the starting load greatly exceeds the operating load or where the machinery is subject to shock loads which might damage equipment, reduce production, or impair quality, the fluid drive application should be considered.

Design of the Drive. The fluid drive, in its simplest form, is composed of two vaned discs, the impeller or driving member, and the runner or driven member. There is no mechanical connection between these two elements, but there is an outer casing which houses the runner and which is joined to the impeller and rotates with it. The power transmitting medium is a light mineral oil.

In operation, the impeller, being driven by a motor, whirls the oil so that it impinges against the runner and drives it. The shaft of the machinery is coupled to the runner so that the machinery is actually driven through the turbine-like action of the oil. The path of the oil through the transmission might be described as similar to that of the stripes on a barber's pole which has been bent to the shape of a doughnut. It would at first seem that a drive of this type would be inefficient, but actually, with proper size selec-



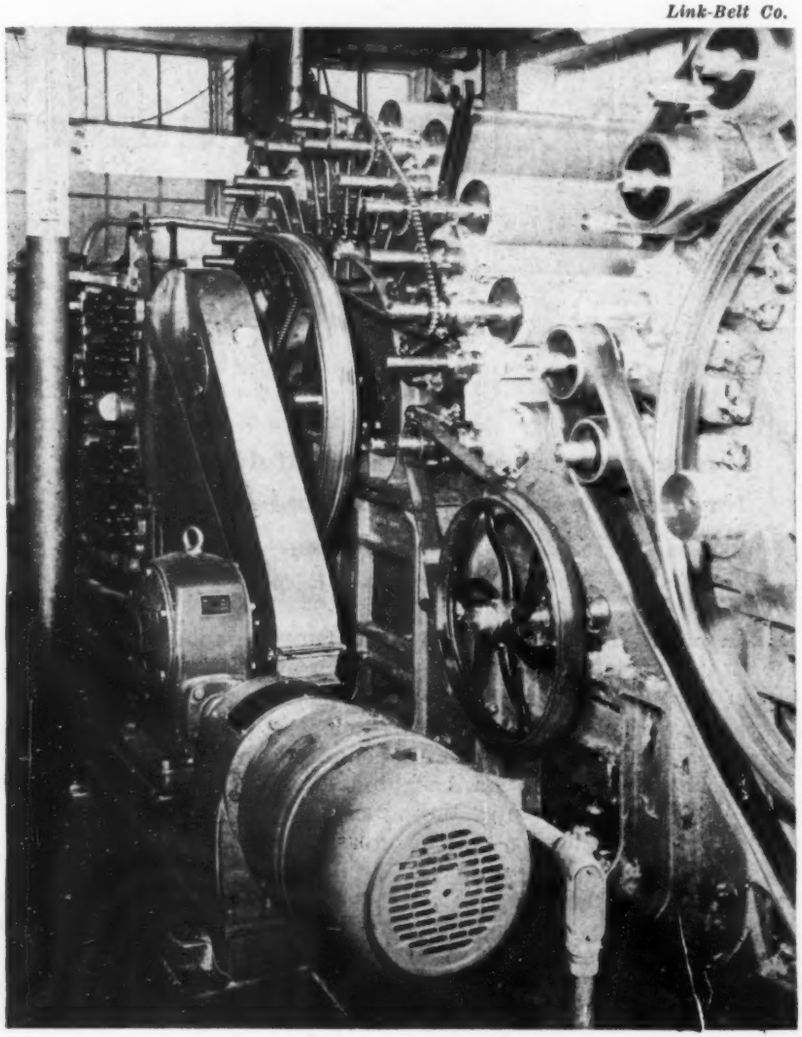
Link-Belt Co.

Sketch showing dimensions of a typical fluid drive unit. The motor (at left) drives impeller in fluid coupling (center), setting fluid in motion and in turn the runner which is connected to worm gear reduction unit (at right).

tion, the slip at full load speed is approximately three per cent.

Constant Speed Drives. There are two general types of fluid drives, the constant speed and the variable speed types. While there may be applications, particularly in finishing plants, for variable speed units, all textile applications so far have been of the simpler, constant speed design.

Link-Belt Co.



Left, fluid drive installation on 60 x 60 woolen card at Northfield (Vt.) Mills. A 5 hp unit is employed to drive the first breaker section. The second breaker and finisher sections are driven by a 10 hp unit.

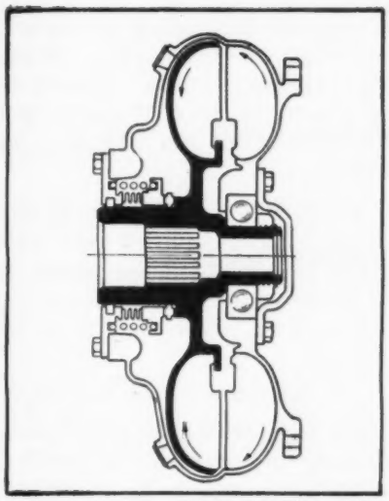
A predetermined quantity of oil, dependent upon the type of duty, is placed in this unit. The unit is sealed, and the oil remains within the assembly. While in operation, the quantity of oil in the fluid drive cannot be changed; consequently, no speed variation is obtainable with this type of unit.

The impeller, the runner, and the casing are the major components of this unit. The impeller is hub mounted to a motor shaft. The end of the driven shaft is supported in the center of the impeller by an internal thrust bearing. This bearing takes care of the axial thrust set up by the fluid circuit and serves as a spacer to keep the impeller and runner in proper alignment.

A seal composed of a sylphon bellows and a carbon composition ring prevent oil from escaping from the circuit. A baffle plate or ring which is attached to the runner at its inner profile serves as a barrier to impede oil flow at starting or low speeds, thus controlling the torque transmitted with stalled output shaft or during starting. As the speed increases, the circulation of the oil moves outward from the baffle under centrifugal force and is not affected by it.

Fluid Drive Performance. A typical performance curve of a general purpose squirrel-cage motor with fluid drive is illustrated. The fluid drive torque curve, **E-F**, and thence to full load torque delivery, has been added to solid lines. The motor is permitted to start unloaded, thus reducing the motor acceleration time and allowing the load to be picked up and accelerated smoothly under ideal conditions of low current and good armature ventilation.

The fluid drive protects the motor from damaging overloads. When an overload occurs, the slip of the fluid drive increases and the torque output rises, following back along the torque curve to point **F**. If the overload is momentary, the increased torque may re-



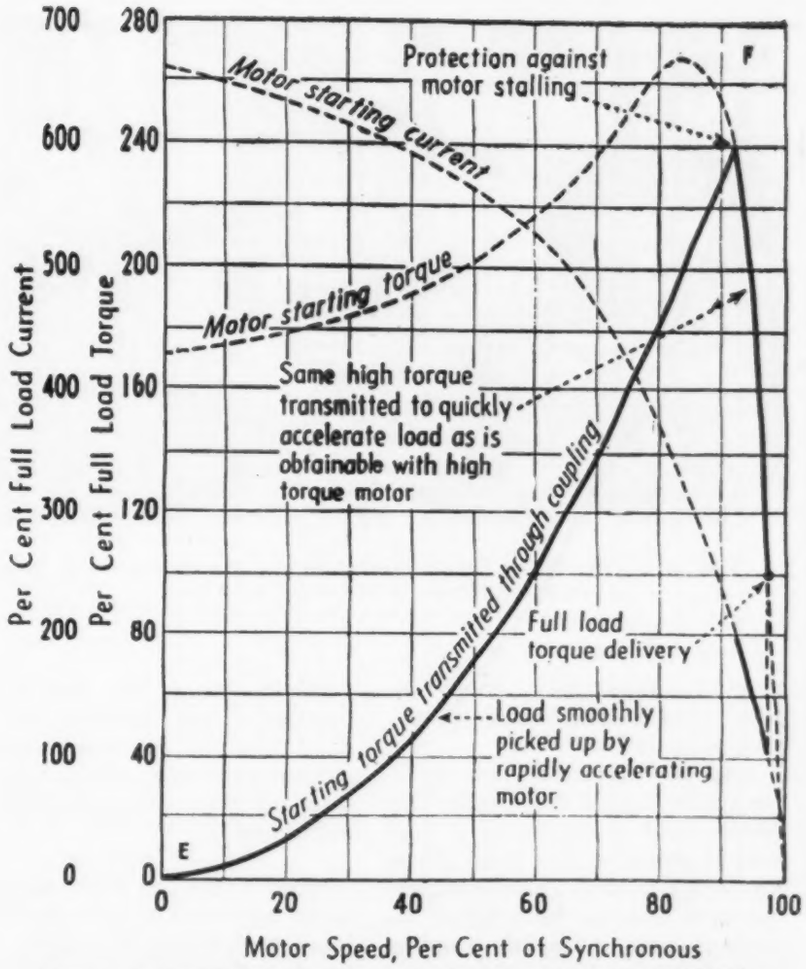
American Blower Corp.

Cross section view of a fluid drive of the constant speed type. The impeller, runner and casing are the major components of the unit. Impeller is hub mounted to a motor shaft.

lieve the condition and permit the motor and fluid drive to return to the rating point. If a heavy and extended overload is imposed, the slip will rise to 100%, the output shaft will stall, and the motor will operate at point **F**, delivering near its peak torque. The point **F** can be varied to meet the needs of any particular application by the installation of the correct size of baffle plate. This baffle is the metal ring or plate fastened to the inner profile of the runner. On any one size of fluid drive, the installation of a larger diameter or a small diameter baffle will cause point **F** to move toward or away from the peak of the motor torque curve as desired. Thus, the fluid drive can be tailored to fit a particular application and provide correct overload protection.

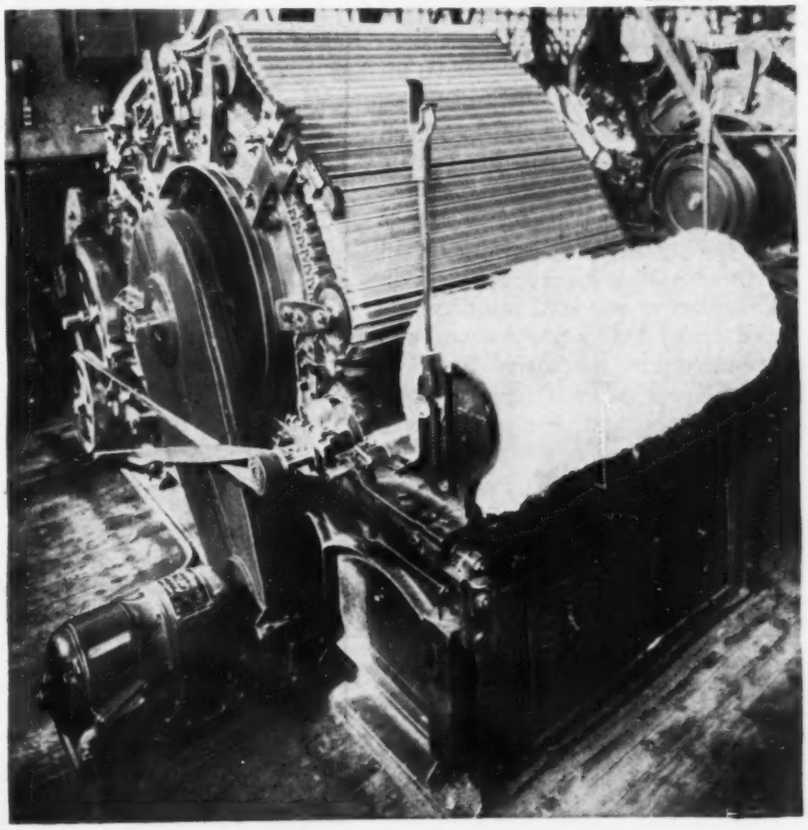
In the Textile Mill. Textile mill applications in this country must still be classified as experimental, for none has been in service long enough to offer positive proof of claimed advantages. However, experimental and short term tests seem good enough to permit recommendation as a theoretically good heavy equipment drive.

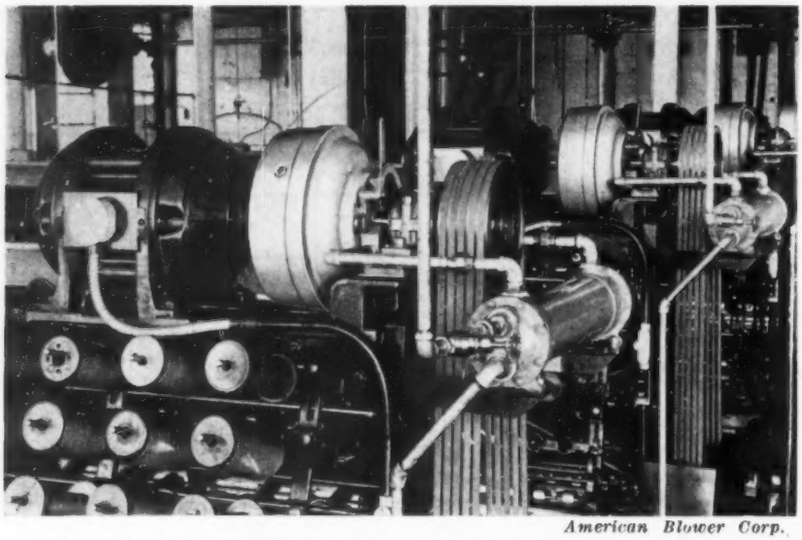
At Northfield Mills, Northfield, Vermont, a 5-hp electric motor driven fluid drive transmits power for the first breaker section of a 60x60 wool card. A 10-hp unit drives the second breaker and finisher sections. The complete drive in each instance consists of an induction motor, fluid drive, flexible



Above, performance curves of squirrel cage motor with fluid drive. Below, cotton card equipped with fluid drive. In this instance a silent chain is employed to connect the card and the fluid drive unit.

Link-Belt Co.





American Blower Corp.

Size 10½ Type Scoop Control Gyrol fluid drive as applied to ring spinning frames in a worsted yarn mill.

coupling, worm gear speed reducer, and a silent chain to the card cylinder.

A typical application in a southern cotton mill is illustrated. This Whitin card is driven by a 1-hp electric motor with a fluid drive. An encased silent chain connects the card and the fluid drive. No speed reducer or flexible coupling is used.

While both of the card drives illustrated are located on the floor, overhead drives are now becoming available which will not take up floor space around the machinery.

Wool Spinning. Fluid drive is being used on gill spinners at the London Spinning Co. Ltd., who fitted a fluid coupling unit to a 48-spindle high speed gill spinner working on hard fiber. Having had twelve months' running experience since conversion from friction drive, they advise as follows:

(1) It was found that with fluid drive a 25-hp squirrel-cage motor could be used, whereas previously a 35-hp motor was required. This resulted in improving the power factor.

(2) Breakage of yarn is practically eliminated as a result of the extremely smooth acceleration.

(3) Operation of the machine is by push button control. With the former lever control, the acceleration of the machine was subject to the human element, whereas now the acceleration is governed automatically by the fluid coupling, which, however, can be readily adjusted to increase or decrease the rate of acceleration by varying the filling of oil.

(4) Operators find there is less fatigue with push button control, and the result is better.

(5) Doffing time is reduced, and the time saved is shown by increased production.

Research Committees Meet at Princeton

A joint session of the Research Advisory Committees of Textile Research Institute and of The Textile Foundation was held recently at the Institute laboratories in Princeton, New Jersey. Progress on a number of research projects carried on by both organizations was reviewed and discussed. In addition, the operation of new research instruments and equipment was demonstrated.

Professor Eugene Pacsu discussed briefly his latest findings in his studies of the structure of cellulose and his work in the field of starch. Professor J. C. Whitwell described progress in investigation of various factors involved in damage to cellulose fibers, and possible methods for protection against such degradation. Professor Arthur Tobolsky reviewed the work thus far on the wool project.

SEYDEL'S BOOK ON "COTTON SLASHING"

The series of 21 articles which have appeared in TEXTILE INDUSTRIES by Dr. Paul V. Seydel under the title "Cotton Warp Sizing" is being ended with this issue, which carries the valuable bibliography.

The entire series is being placed in book form, under the title "Cotton Slashing" and it will be available shortly to members of the industry. In addition to the complete series on "Cotton Warp Sizing" which has attracted much interest, the book will contain the most comprehensive bibliography on the subject that has been compiled from both books and periodicals, information of specific technical value related to weaving, calculations, tables, a nomograph, forms for checking and keeping records, and other useful information.

As readers who have followed the series know, Dr. Seydel has endeavored to keep his discussions on a practical basis, but has found it necessary at times to take the reader into the chemistry and physics of warp sizing.

The book offers the reader a source of information and reference that is not available elsewhere.

Bound in attractive blue non-flexible covers for the mill man's permanent library, it may be secured for $3.50 per copy. Artcraft paper flexible cover, pocketsize $2.00. Also available in artcraft paper cover with new or renewal subscription to TEXTILE INDUSTRIES, 3 year's subscription plus book $5.00—J.C.F.

Management and Employees Benefit from

Industrial Vision Programs

Staff Prepared

MANY TEXTILE MILLS have now adopted in the personnel program a plan designed to improve employees' vision. These "Industrial Vision Programs" differ in detail from plant to plant and even from department to department within the plant, but the fundamental methods and objectives are generally similar.

In every instance employees and applicants for jobs are given some sort of eye test to determine whether they have satisfactory vision. If vision is faulty the person is asked to visit an eye doctor to have the trouble corrected.

What Is Good Vision? Until quite recently it was believed necessary to make a study of each job and then attempt to have the employee's eyes corrected to suit that particular work. While there are, admittedly, a few jobs that require special "work glasses" even for a person with normal vision, it is now felt that good vision is good vision in the plant or out. It is best to correct eyes to a normal rather than to a particular job. Charles E. McNary, personnel director of Blue Bell, Inc., explained this point in a talk he recently made before the Southeastern Industrial Vision Congress, held in Atlanta, Georgia.

"Far acuity* may not be needed on the job, but it is needed in driving a car to and from work, sitting through a movie, or other use of the eyes during leisure hours. Excellent far acuity decreases the worker's accident hazards and lessens fatigue, thus enabling him to be at his best when he returns to work. Vision corrected 'for living all the hours of life' becomes the slogan rather than 'vision for a specific job'; in other

BENEFITS OF A GOOD VISION PROGRAM

Reduced Accident Rate—One mill reports half as many accidents among employees with good or corrected vision.

Lower Insurance Cost—This is a direct result of reduced accidents.

Increased Production—Plants giving eye test report immediate increase in production rate once employee's vision has been corrected.

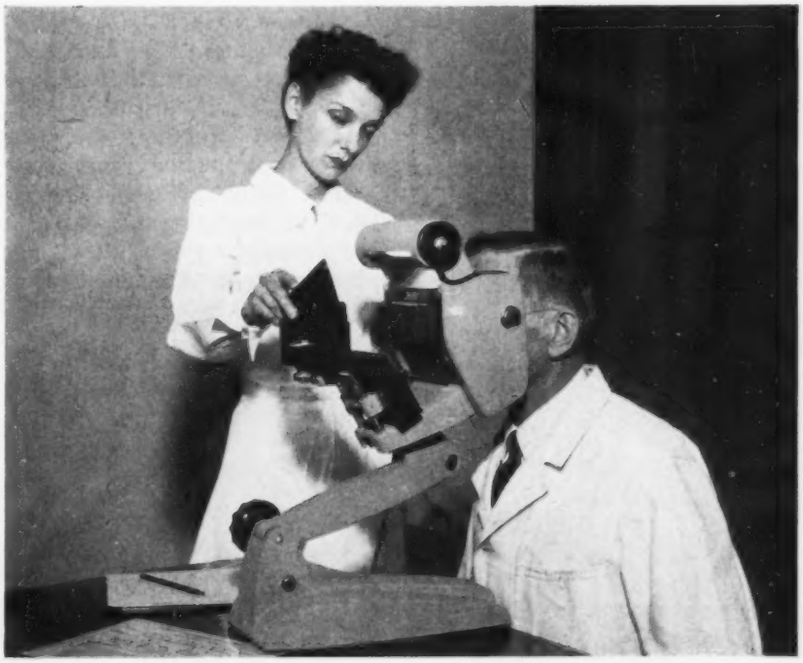
Increased Earnings—Improved production rates on piece-work are particularly noticeable with corrected vision.

Speed and Accuracy—Not only is production increased, but waste is cut when the employee can correctly see the work.

Less Absenteeism—Mills generally report marked improvement in employee health and fewer absentees. Good eyes are important to good health.

Job Security—The knowledge that good glasses and eye treatment will preserve good vision makes the worker secure in his job as he grows older and his sight weaker.

Training Cost Reduced—A drop of 1/3 in training cost is to be expected if applicant's eyes are tested before employment.



Visual screening test being administered with Keystone View Company's Model 46-A Telebinocular. With the instrument set for "far-point" vision, tests are made of the vertical alignment of the eyes, acuity of each eye, stereopsis, horizontal alignment, and color perception. By turning knob on the side of the instrument, the optical system is lowered to a normal reading angle for use of the reading distance magazine of test targets, with which near-point acuity of the eyes is checked. A test for lateral imbalance at 16-inch working distance is provided.

*Far acuity—the ability to see sharply and accurately at a distance.

Official U. S. Navy photo

Using a Bausch & Lomb Ortho-Rater for checking an employee's visual skill. Tests are made of twelve visual functions which relate to most jobs and which affect the efficiency, safety, and morale of employees.

words, correction for exact work distances could be exploited and become the basis for a racket."

The Program's Function. It is customary for the vision program to be under the direction of the personnel manager. He must arrange for one of his staff to be instructed in the giving of eye tests, and some area must be set aside for the necessary test equipment. This equipment occupies little space and is easily operated.

The test will indicate several different types of sub-normal vision, but the report to the employee may or may not go into detail as to the trouble and its cause. The person giving the eye test never attempts to prescribe treatment. This is left to the doctor to whom the employee is referred.

American Optical Company's Sight-Screener has three controls for use in routine screening, one for height, one for head-rest adjustment and one for moving the target through the 14 test positions.

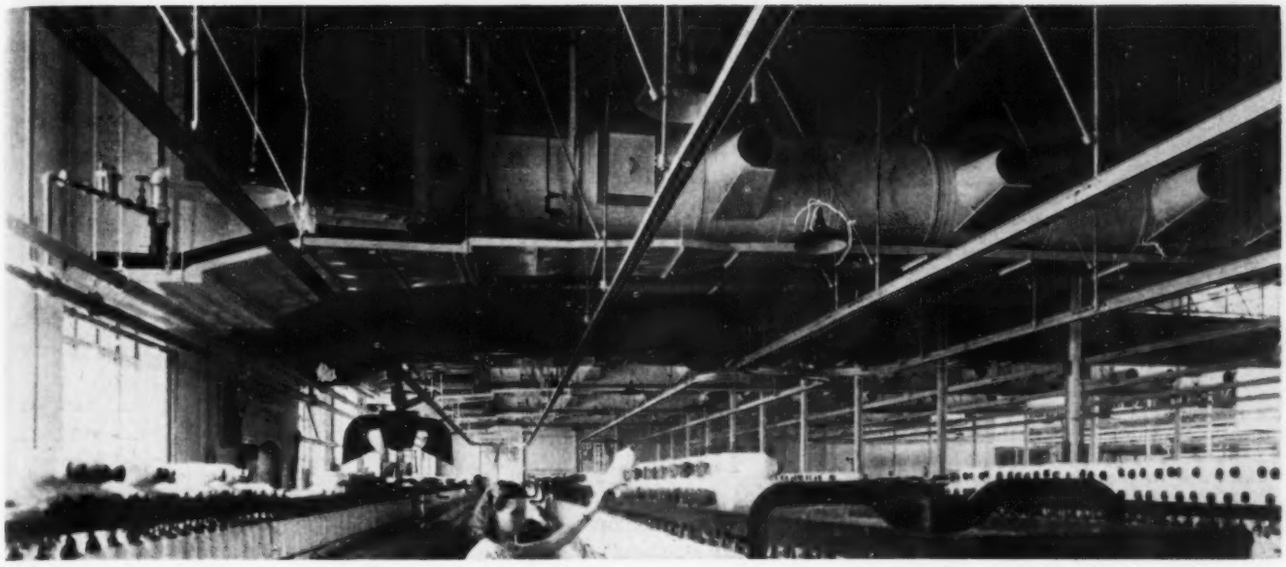
Benefits to Management. Definite economic benefits resulting from a vision program can be proved. Management may expect a decrease in production cost, material cost, training cost, accident cost, and overhead expenses, as well as an improvement in employee morale. "A program for conservation and utilization of eye-sight in industry will bring a great, if not greater, return on the investment of time and attention as any other element of scientific management," says one mill man who uses these tests. The Greensboro plants of Blue Bell, Inc., found that visual aid and dexterity tests for applicants for employment saved $80.65 on each trainee employed during 1947, through the elimination of misfits and people having visual and physical handicaps.

E. W. Howard, assistant personnel director, Fulton Bag & Cotton Mills, Atlanta, Georgia, has found that those workers having low visual skills have more than twice the number of accidents as workers with adequate vision. Workers with low visual skills have 20% lower efficiency (as measured by merit ratings) than workers as a whole.

G. Luther Weibel, Jr., personnel director, Magnet Mills, Inc., Clinton, Tenn., reports that Magnet has saved, as a direct result of their vision program, $9,000 in training cost in two years. Also, the mill finds 35%-50% less absenteeism among employees who have proper eye-sight. Labor turnover rate in the plant is about half the average for the seamless hosiery industry.

Benefits to Employees. While increased production is certainly

(*Continued on page* 209)



Electrostatic air cleaner (left foreground) installed in an individual, self-contained forced air system. Several such systems may be used in a large mill area.

Electrostatic Air Cleaners *can improve product quality • reduce maintenance costs • improve comfort and health*

By C. H. McWHIRTER and R. P. POSEY
Westinghouse Electric Corporation

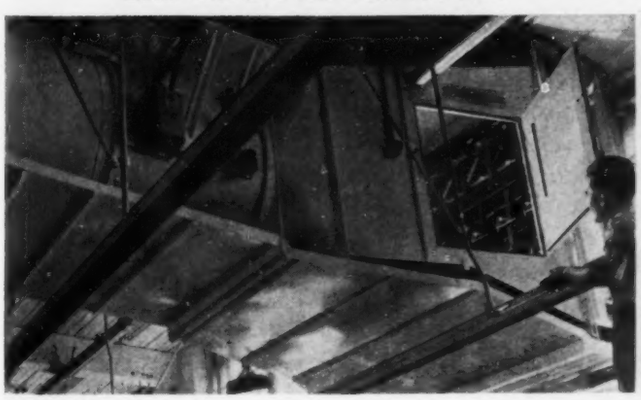
SPOILAGE of yarn and cloth due to dirt has long been recognized as a major problem in the textile industry. Spoiled work, maintenance, and cleaning bills added to the cost of operating, sometimes results in a mill producing on a marginal profit, whereas it could be a more profitable organization if the amount of seconds caused by dirt could be reduced economically.

The development of the electrostatic air cleaner has brought forth the possibility of higher standards of industrial cleanliness heretofore considered impossible to achieve economically. Substantial savings can be effected in many instances where seconds are caused by dirt laden air.

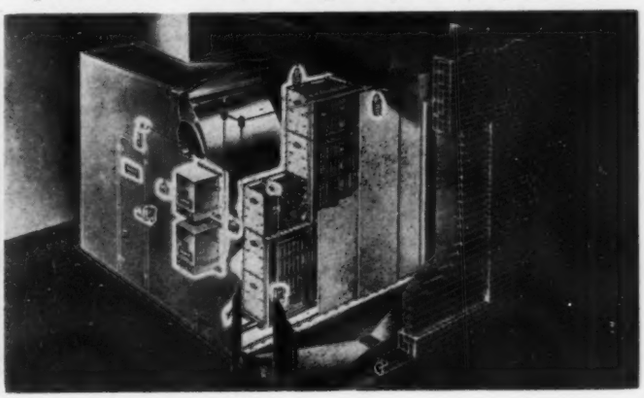
Principle of Operation. Electrostatic precipitators place an electrical charge on air borne particles, then deposit them on an op-

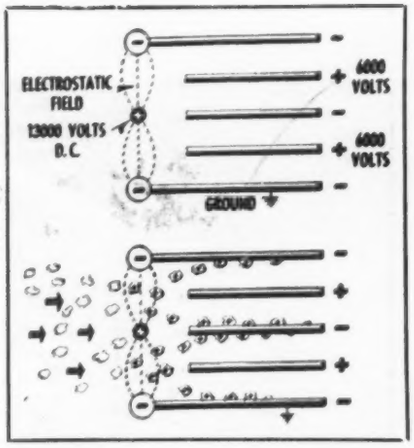
Based on a paper presented to the A.I.E.E. southern district meeting in Birmingham, Ala., November, 1948.

Ceiling mounted ductwork of individual air systems. Each duct is a self-contained unit.



Central systems can supply entire sections of the plant with air in line with plant process requirements.





Electrostatic precipitators place an electrical charge on air borne particles, then deposit them on an oppositely charged surface. The Precipitron places a charge on the particles in a chamber which is independent from that which collects the particles. By using this two-stage principle, the voltage required for the process has been reduced from 30,000 to 13,000.

positely charged surface. The Westinghouse precipitator places a charge on the particles in a chamber which is independent from that which collects the particles. By using this two-stage principle, a unit requiring a maximum of 13,000 volts has been made possible. Formerly, 30,000 volts were required.

The electronic air cleaner developed by Westinghouse has been designated Precipitron. The unit consists of three essential elements: the ionizer; the collector cell; and the power pack. The ionizer places a positive charge on air borne particles without creating an excessive amount of ozone. It consists of tiny tungsten wires spaced parallel and in line with parallel tubes at ground potential. A high positive d-c voltage on the ionizer wires causes the space between the wires and the rods to become saturated with free positive ions. Particles pick up a surface positive charge as they are blown through this ionized space.

After passing through the ionizer section, the air then flows between oppositely charged plates in an electrostatic chamber where the dirt particles are deposited on the negatively charged plates. There they remain until the plates are washed.

The collector section is made up of metal plates parallel to the air flow, the spacing between plates being approximately 5/16-inch. Alternate plates are charged at 6000 volts d-c.

The third essential element is the power pack. The most economical power pack developed is a modification of the standard voltage doubling electronic circuit. Two voltage leads are brought out, one supplying 13,000 volts d-c for the ionizer section, the other supplying 6,000 volts d-c for the collector section. The wattage dissipation is small, being approximately 15 watts per 1000 cfm.

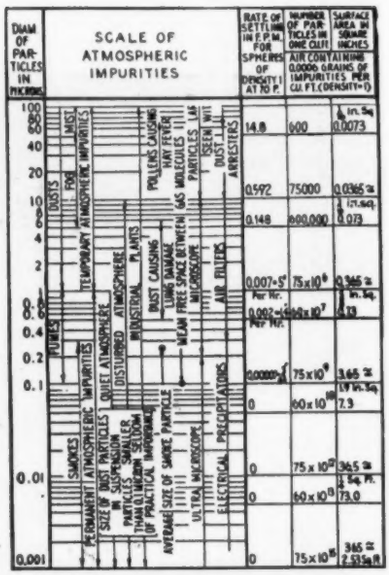
Electrostatic air cleaners of this type are approved by the Underwriters Laboratories, Inc., both from the standpoint of electrical shock and fire hazards when installed and operated according to the manufacturer's recommendations.

Cleaning the Precipitron. Dirt deposited in the collector cell plates must be removed at regular intervals, usually of three to six weeks duration. The simplest and most economical method of dirt removal yet devised consists of merely spraying the collector cell with water which washes the dirt down the drain.

For small installations, the most economical method of removing this dirt is to wash the cell and ionizer by using a water hose. One man can wash a 1000 cfm section in approximately ten minutes.

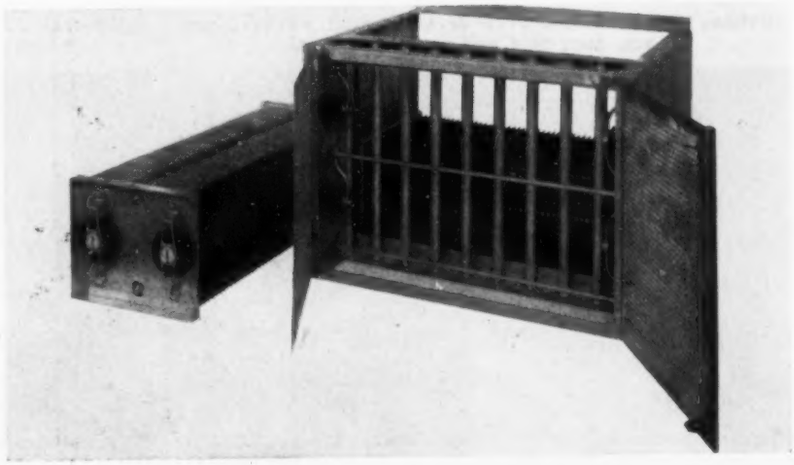
After the collector cells and ionizers have been washed free of dirt, an adhesive is sprayed on which makes it possible for the cell to hold much larger quantities of dirt between washings. The latest development in adhesives is fireproof, non-oxidizing and may be sprayed on immediately after washing, allowing the unit to be placed back in service in a minimum of time.

For larger installations of 40,000 cfm or more, automatic washers and adhesive applicators have been found to be economical. These washers are constructed in such a way that a column of cells can be sealed off, washed, and ad-



A graphic illustration of the dust particles that abound in the air. The larger particles slowly settle or can be easily removed, but the smaller particles which are responsible for much damage and human discomfort were almost impossible to remove until modern equipment made it possible.

Westinghouse frame and ionizer for two cells, each rated at 1000 cfm, 90 per cent blackness or discoloration test, as determined by the U. S. Bureau of Standards.



hesive applied while the remainder of the cells are in operation.

The component parts of the air cleaner are manufactured in standard sizes which may be combined to form units of any desired size and air handling capacity.

Application in Textiles. Electrostatic air cleaners in textile plants can be justified on the basis of improved product quality, reduced maintenance costs, and improved comfort and health conditions. They are usually installed in one or more of three general types of systems:

(1) Central systems, can supply entire sections of the plant with air (cleaned and otherwise conditioned) in line with plant process requirements.

(2) Numbers of small individual forced air systems are frequently installed in a single large room. Each individual system usually consists of a large ceiling mounted duct with electrostatic air cleaner.

(3) Forced air systems for the drying of yarn require air that is extremely clean. This is particularly true in those installations where air is forced through the yarn packages. Electrostatic air cleaners offer the best and in many cases the only available means of insuring clean air for such applications.

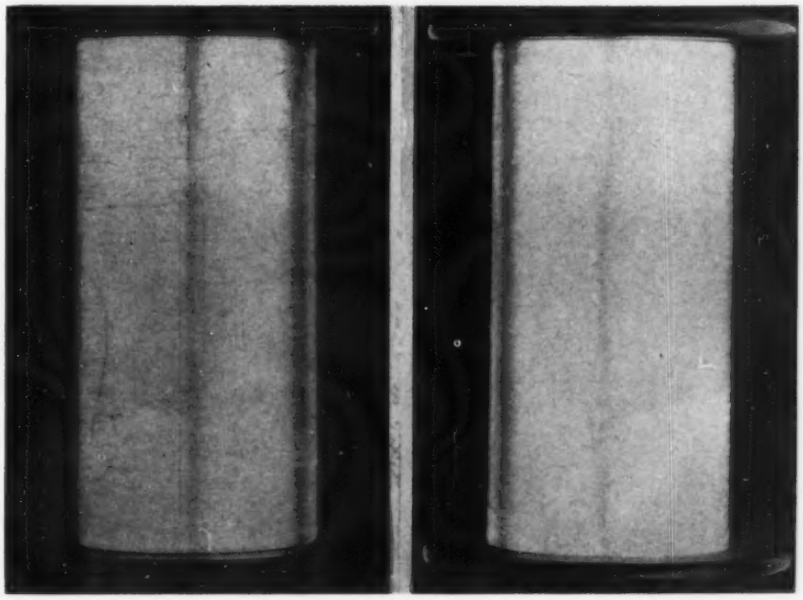
Electrostatically cleaned air may be particularly justified for those areas of a textile plant in which the operations of throwing, spinning, and twisting are performed. Each of these operations involves high velocity motion of yarn through air, generating high static charges which attract atmospheric dirt particles. These are mostly carbon particles which are twisted into yarn, causing permanent discoloration.

Yarn and filament breakage causes loose ends to be thrown about at high velocity, attracting microscopic dirt particles. This results in dirty yarn. The removal of atmospheric dust, and oil mist generated by the rapidly moving spindles, by electrostatic air cleaning can effectively reduce the inclusion of dirt within the yarn.

In order to insure a high quality of finished product, some mills have found that electrostatically cleaned air is necessary in virtually all operations. Contact of the yarn or cloth with contaminated surfaces produces dirt smears which may be difficult or impossible to remove, resulting in an inferior product. For example, in 1942, a southern textile mill produced 1,000,000 yards of rayon filled crepe, satin and voile per month with a spoilage of 168,000 yards per month. Upon installa-

The drying of yarn frequently involves the direct passage of heated air through the yarn package. The package itself acts as a filter, and any dirt which may be in this air is retained by the yarn. Consequently, all dirt particles should be removed from the process air. The electrostatic air cleaner is an effective device for such an application.

Left, a spool of dirt streaked rayon yarn. Right, a spool wound in a room where the air is cleaned by Precipitron. Yarn and filament breakage causes loose ends to be thrown about at high velocity, attracting microscopic dirt particles. This results in dirty yarn. The removal of atmospheric dust and oil mist generated by the rapidly moving spindles by electrostatic air, can effectively reduce the inclusion of dirt within the yarn.



tion of electrostatic air cleaners the maximum spoilage dropped to 50,600 yards per month, an increase of 14% in top quality production. The cost of electrostatic cleaners can be amortized quickly under such conditions.

Drying Yarn. The drying of yarn frequently involves the direct passage of heated air through the yarn package. The package itself acts as a filter, and any dirt which may be in this air is retained by the yarn. Consequently, all dirt particles should be removed from the process air. The electrostatic air cleaner is an effective device for such an application.

In all applications the quality desired in the final product is the controlling factor. For example, in materials which will be dyed a dark color there is little point in going to extremes of cleanliness.

In order to obtain best results, both make-up air and recirculated air should be cleaned.

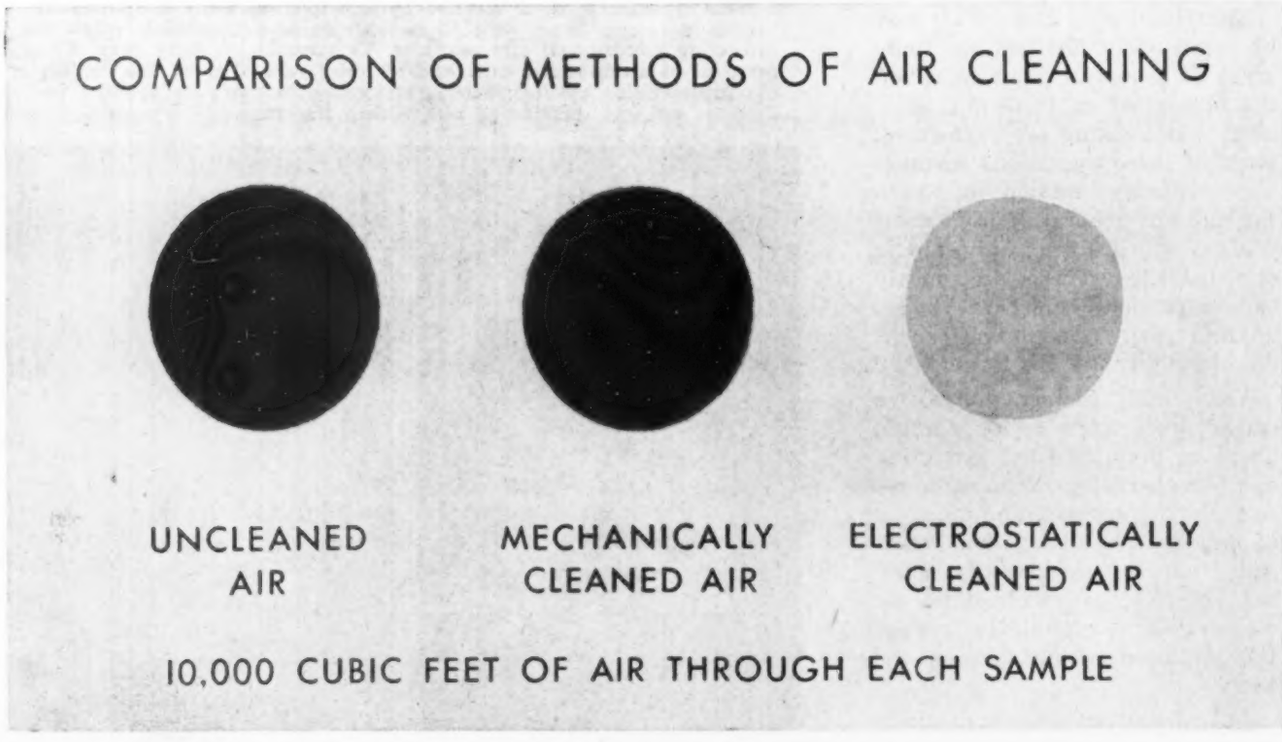
Removal of Lint Essential. An important problem in textile applications is that of lint, particularly in cotton and woolen mills. Unfortunately, electrostatic air cleaners are not designed for lint removal because the fibers tend to align themselves perpendicular to the charged plates and as a result may cause intermittent electrical breakdown and arcing between the plates. This increased arc-over rate reduces the efficiency of operation and, where an extreme arc-over rate is encountered, damage to the equipment may result. Therefore, it is essential to remove lint from the air prior to electrostatic cleaning.

A 16 to 20 mesh screen has been found to offer an effective solution to the problem. A mat of lint will collect on such a screen and must be removed at frequent intervals to prevent blocking the air flow. However, since this mat of lint will roll into cylinders with a sweeping motion of a broom or brush, its removal from the screen is not a difficult or lengthy process. Arc-over rates can be reduced by as much as 10 to 50 times merely by the use of a screen placed in front of the electrostatic cleaner. It should be noted, however, that arc-over usually cannot be completely eliminated.

An air washer, through which air must pass before entering the electrostatic air cleaner, provides another method for the removal of lint because the water sprays in such a washer effectively trap the lint. However, great care must be exercised to prevent the entrance of entrained water droplets into the electrostatic air cleaner. Such droplets will cause excessive arcing, corrosion, ionizing wire breakage and other damage.

Removes Bacteria. Electrostatic air cleaners are usually considered only for the improvement in product quality. However, there is another feature of these cleaners which is not often recognized. This is the reduction of air borne bacteria and spores which attach themselves to tiny dirt particles as a means of locomotion and existence. These air borne organisms are removed along with the dirt particles with consequent reduction in diseases and respiratory infections. A reduction in manhours lost due to sickness is reflected directly in plant efficiency, offering additional justification for electrostatic air cleaners.

In a blackness or discoloration test enough air is drawn through sampling tubes from the dirty and clean air sides of the air cleaner to form equal discolorations on filter papers. By comparing the volumes of air, an index is found which gives the efficiency of the cleaner. Electrostatic air cleaners can give an efficiency of 90 per cent or better by such a test. A sample is present at extreme right although it is very faint.


COMPARISON OF METHODS OF AIR CLEANING
UNCLEANED AIR
MECHANICALLY CLEANED AIR
ELECTROSTATICALLY CLEANED AIR
10,000 CUBIC FEET OF AIR THROUGH EACH SAMPLE

Monday Morning Start-Ups Easier

Rayon weaving plant maintains heat over week-end but starts humidifiers early Mondays.

PANSY Weaving Mills, Inc., Pawtucket, R. I., are securing weaving efficiency of about 95% on fabrics made from estron and viscose filament rayon yarns.

Section beams are prepared on the cotton system at 250 yards per minute and are sized on Johnson 7-cylinder slashers at from 30 to 40 yards per minute. For estron the size mix is prepared with sodium salt base, with gelatin being used on the viscose.

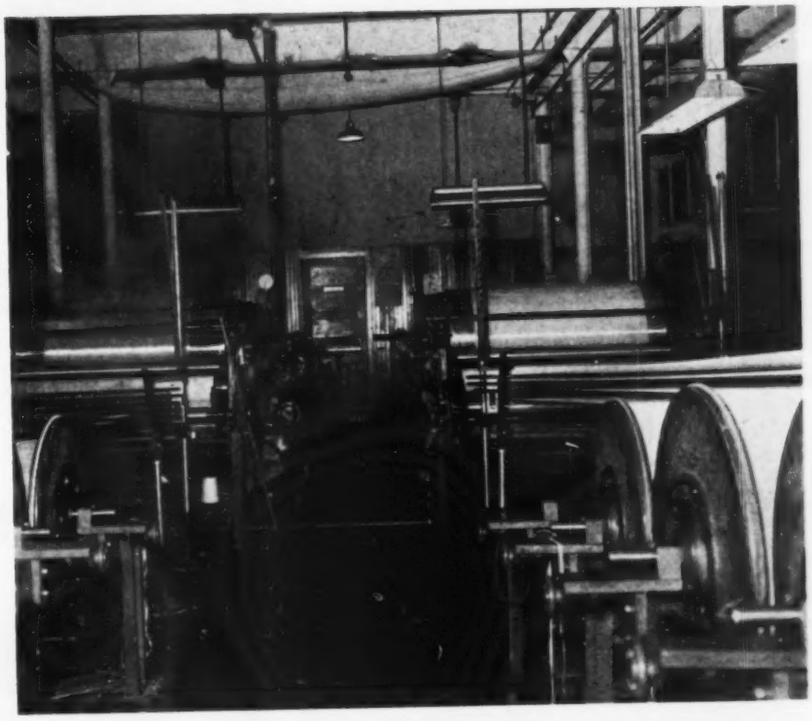
The company has found that best weaving results are obtained at a relative humidity of 62-63% at 82 degrees F., this being discovered after experimenting with 65% relative. On week-end stops during the winter the heating is maintained at approximately 75 degrees F., without humidity, but the humidity is turned on four or five hours before starting the looms on Monday morning. During the summer no heat is maintained, but the practice of humidifying the room early Monday is continued.

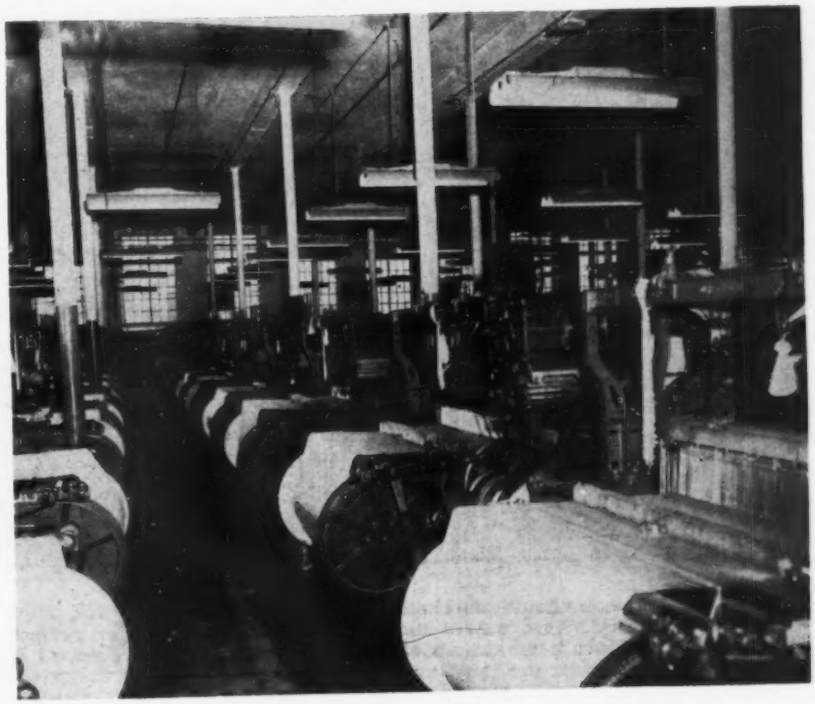
The filling packages are wound on Whitin Schweiter machines with a minimum of tension, which is said to reduce broken filling, shell-offs, and shiners.

As in other plants, some difficulty is said to be encountered in starting after the week-end stop-off because shuttles and binders are cold, but with the system of retaining heat in the mill and starting humidifiers early on Monday, stoppages at starting time have been reduced to no more than three to five per cent for the first two hours.

Model XD looms produce the fabric at this plant.

The air conditioning system provides positive ventilation with washed air in all seasons and has adequate evaporative cooling capacity for the summer.

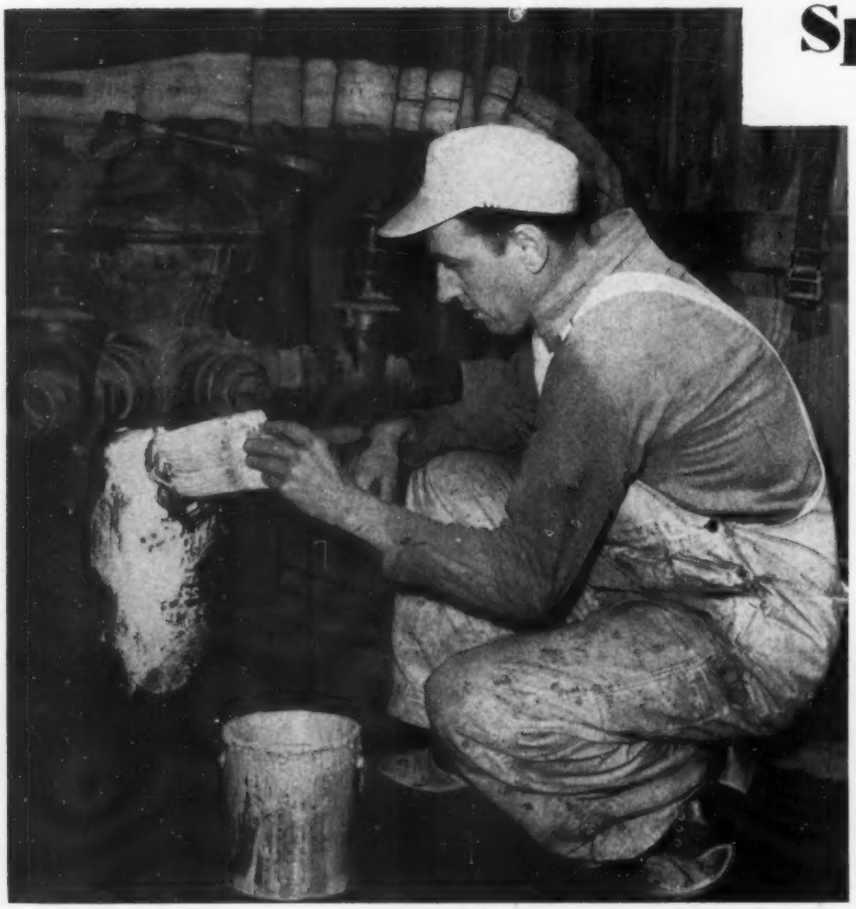




Above, slashers at Pansy: sodium salt is used for sizing estron, gelatin for viscose. Below, Model XD looms operate in 62-63% relative humidity. Efficiency is approximately 95%.

In addition to presenting an untidy appearance, piles of junk and trash are a potential source of danger. Many fires, accidents, and injuries could have been easily avoided by promptly removing discarded crates, boxes, and other refuse from the plant grounds. Oftentimes much valuable work space is congested by waste.

Springtime is



SPRING is a good time for a general clean-up both inside and outside of mill buildings. Bad weather conditions during the winter season often hamper regular disposal operations. Plant wastes, etc., should be removed.

Water hydrants should be checked for ease of operation and kept free from rust. Hose valves and threads must be kept in perfect condition to insure maximum efficiency and safety. If equipment is arranged ready for use, an emergency may be more easily thwarted.

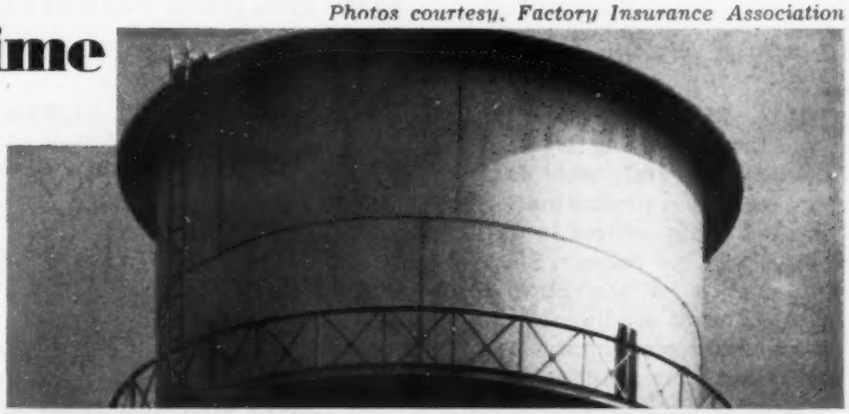
All valves should be correctly identified, oiled regularly, kept accessible, and checked for operation by regular inspection.

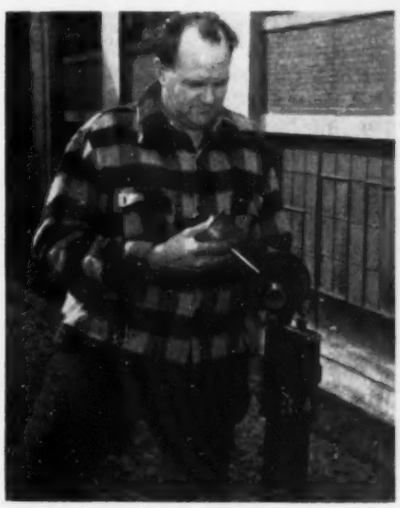
Accumulations of trash, both inside and outside of the plant, should be thoroughly cleaned up and removed from the premises. Corrective measures should be taken to prevent unsightly, insanitary, and hazardous deposits of materials which serve no useful purpose. Bad weather fosters bad practices in trash disposal.

Photos courtesy, Factory Insurance Association

Clean-Up Time

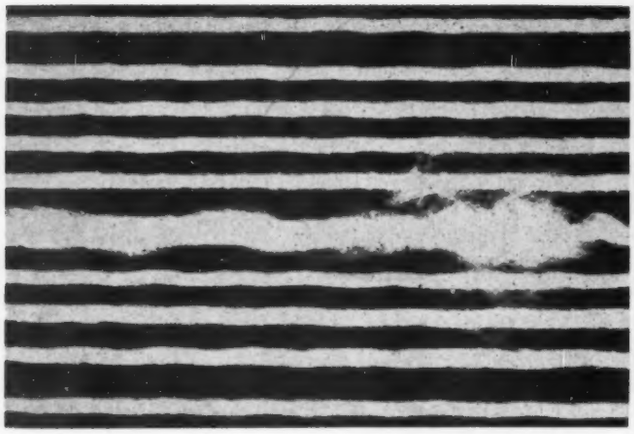
Safety and accident prevention should be carefully considered in planning a clean-up program. Fire protection equipment should be among those items foremost on the list to be inspected and prepared for another season of usefulness.



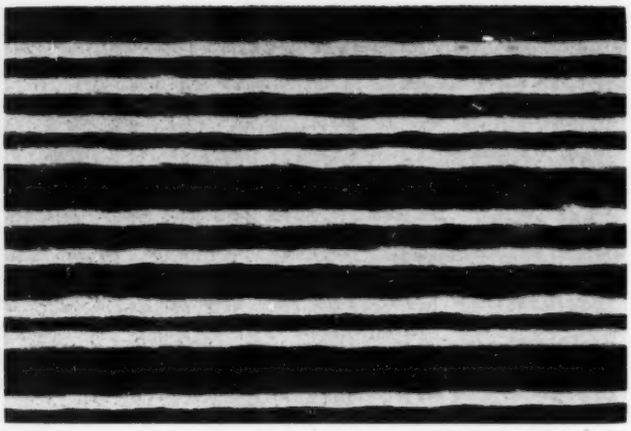


Valves shut off for winter should be opened as soon as danger from freezing has passed. Sprinkler valves should operate easily.

Top, elevated tanks represent a considerable investment which should not be neglected. Periodic inspection may save major repair bills. Bottom, pump houses, hose houses, and other structures housing vital equipment should be repaired at regular intervals.



Sample of 4.00 hank roving made according to machine manufacturer's draft guide when running 1 1/16-inch Wilds 13 cotton. Note unevenness of stock.



Sample of 4.00 hank roving made according to new draft guide prepared by research laboratory, as applied to 1 5/16-inch Wilds 13 cotton. Note evenness.

Drafting Long, Fine-Fiber Cottons

on Super-Draft Roving Frames

By JAMES R. CORLEY
Southern Regional Research Laboratory*
New Orleans, Louisiana

EXCLUSIVE

LABORATORY experiments on the 8 x 4-inch Super-Draft roving frame indicate that the machine manufacturer's draft gear tables are more suitable for processing short staple cotton than for processing long staple cotton. The author of this article explains the details of a new draft guide which was developed for use in processing long, fine-fiber cotton. An improvement in production and roving and yarn uniformity, in the laboratory, was attributed to the use of the new draft guide.

TRIAL RUNS with the Super-Draft** roving frame using the available draft table disclosed that maximum product uniformity was not being secured in drafting long, fine-fiber cottons. Since the introduction of the Super-Draft system, world conditions have afforded little opportunity to study its merits or explore its possibilities.

The compound drafting section, or dual drafting zone, on this type of frame permits mechanical drafts of from 10 to 72. This gives it certain advantages over the conventional or single-zone frame. The reception given the new system emphasizes the need for developing data adequate for securing the highest degree of product regularity when processing different varieties of cotton.

This treatise deals with an application of draft factors to obtain product uniformity in drafting long, fine-fiber cottons. A new draft guide is presented, whereby a higher level of roving uniformity can be secured with the system when processing these cottons.

The new guide was developed as a result of studies of the system using both the existing draft table and a wide range of experimental settings. Many tests for uniformity were made using roving made on the 8 x 4 frame. The study began with an investigation to aid in improving mechanical processing techniques for cotton tire cord.

Super-Draft Study. The only guide available for the Super-Draft system was a draft change gear table furnished by the machine manufacturer. Although roving manufactured according to this guide from cotton of 1-inch staple or less was uniform enough for most end uses, difficulty was experienced in processing long, fine-fiber cottons. Unevenness, using 1 1/16-inch Wilds 13 (considered a long, fine-fiber cotton), hindered production by causing excessive end breakage. A lack of uniformi-

* One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

** The mention of trade products does not imply their endorsement by the Department of Agriculture.

ty prevailed in all counts from 2.00 to 6.00 hank.

The mechanical condition of the machine and the settings were found to be satisfactory in a check for the cause of uneven roving. Corrective measures were tried, and only two gave a favorable response. Roving uniformity was improved (1) by increasing the weight pressure on the top drafting rolls (obviously an undesirable method); and (2) by changing the drafts between the two zones of the drafting section. This second step led to a study of the compound drafting section and the recommendations on the machine manufacturer's draft guide, to determine the effects of draft in controlling evenness of the roving.

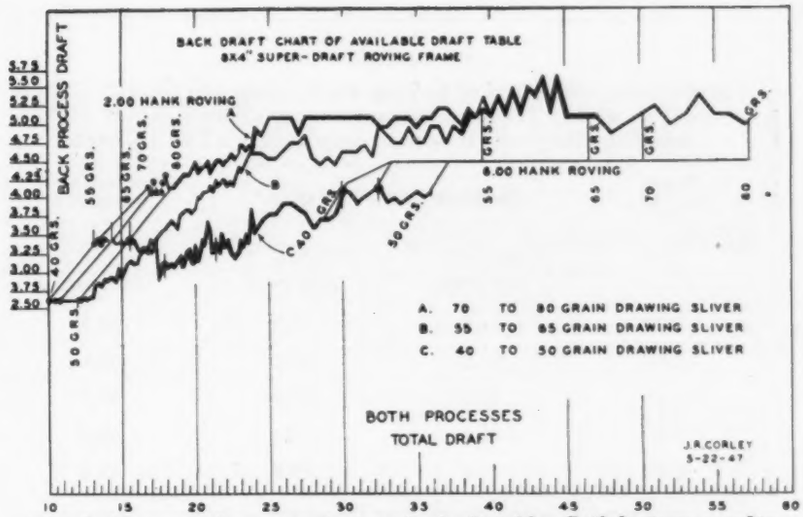


Fig. 1. The machine manufacturer's draft table. Satisfactory results were not reported on long staple cotton when this chart was used in the laboratory.

Effects of Drafts. Three important factors should be considered in allocating draft in the compound drafting system. The work showed that each one exerts an influence on the uniformity of roving. They are: (1) the ratio of the rear zone draft to the total draft of the compound drafting section; (2) the ratio of the rear zone draft to the weight of the stock fed; and (3) the total draft of the compound drafting section.

The effective range of total draft in the compound drafting section has not been clearly defined with respect to product regularity. Information on the effect of extremely long drafts is very limited. The machine manufacturer's draft change gear table covers a range of total drafts from 10 to 72. Drafts of around 24 are common practice in the cotton textile industry, and about 40 is the maximum being used for the dual-zone system of drafting.

A study of the draft change gear table indicated that the three important elements of draft were not applied to best advantage. Figure. 1 is the draft change gear table which shows the manner in which the draft elements are applied. The curves (A, B, and C) show the weights of the sliver fed, plotted against the total drafts of the compound drafting section and their respective drafts in the rear drafting zone. The latter are conversions of the respective rear zone draft change gears of the table. Since draft is a function of the change gear, the same relationship of the curves is shown by the use of either the draft or its corresponding change gear. Each curve represents a sliver weight range of 10 grains per yard plotted against the allocated drafts.

Figure 1 gives evidence of the following:

(1) Erratic ratio of draft in the rear drafting zone to the total

Fig. 2. Guide for drafting long, fine-fiber cotton with the Super-Draft 8" x 4" roving frame as developed at Southern Regional Research Laboratory.

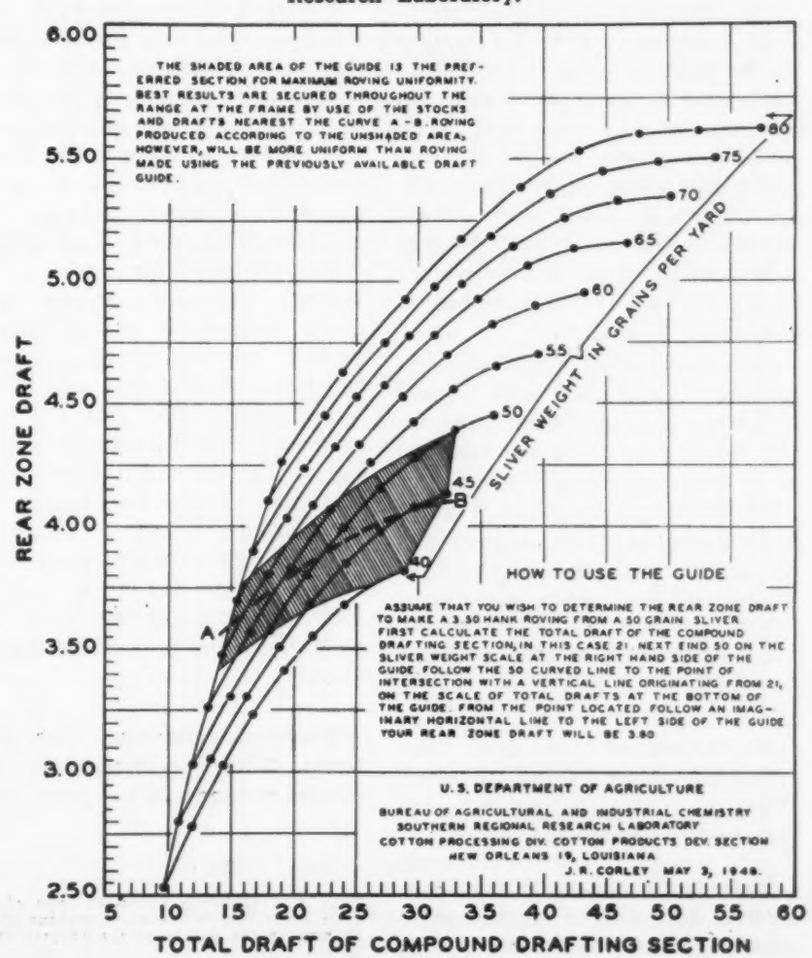

THE SHADED AREA OF THE GUIDE IS THE PREFERRED SECTION FOR MAXIMUM ROVING UNIFORMITY. BEST RESULTS ARE SECURED THROUGHOUT THE RANGE AT THE FRAME BY USE OF THE STOCKS AND DRAFTS NEAREST THE CURVE A-B. ROVING PRODUCED ACCORDING TO THE UNSHADED AREA, HOWEVER, WILL BE MORE UNIFORM THAN ROVING MADE USING THE PREVIOUSLY AVAILABLE DRAFT GUIDE.
REAR ZONE DRAFT
TOTAL DRAFT OF COMPOUND DRAFTING SECTION
SLIVER WEIGHT IN GRAINS PER YARD
HOW TO USE THE GUIDE
ASSUME THAT YOU WISH TO DETERMINE THE REAR ZONE DRAFT TO MAKE A 3.50 HANK ROVING FROM A 50 GRAIN SLIVER. FIRST CALCULATE THE TOTAL DRAFT OF THE COMPOUND DRAFTING SECTION, IN THIS CASE 21. NEXT FIND 50 ON THE SLIVER WEIGHT SCALE AT THE RIGHT HAND SIDE OF THE GUIDE. FOLLOW THE 50 CURVED LINE TO THE POINT OF INTERSECTION WITH A VERTICAL LINE ORIGINATING FROM 21, ON THE SCALE OF TOTAL DRAFTS AT THE BOTTOM OF THE GUIDE. FROM THE POINT LOCATED FOLLOW AN IMAGINARY HORIZONTAL LINE TO THE LEFT SIDE OF THE GUIDE. YOUR REAR ZONE DRAFT WILL BE 3.80
U.S. DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY
SOUTHERN REGIONAL RESEARCH LABORATORY
COTTON PROCESSING DIV. COTTON PRODUCTS DEV. SECTION
NEW ORLEANS 19, LOUISIANA
J.R. CORLEY MAY 3, 1949.

TABLE 1

Comparative Variation of Roving Made from 1 5/16-inch Cotton, by Use of the Machine Manufacturer's Draft Guide and Southern Regional Research Laboratory's Draft Chart.

Hank Roving	Coefficient of Variation*		Decrease in Variation
	Control**	S.R.R.L.***	
	Per cent	Per cent	Per cent
2.00	21.3	11.8	44.5
3.00	22.3	15.6	30.1
4.00	24.0	14.6	39.2
5.00	24.4	13.2	46.9
6.00	22.9	16.6	27.5

* Standard Deviation divided by the average from 75 observations on 300 yards of roving from each roving number.
** Draft distributions from manufacturer's draft guide.
*** Draft distribution from Southern Regional Research Laboratory's draft guide.

draft. Although there is a trend toward increases in rear zone draft and total draft, the trend is irregular. This is shown by Curve C where a shorter rear zone draft is used with a total draft of 22.60 than with one of 20.80.

(2) Erratic ratio of draft of the rear drafting zone to the weight of the stock fed. Again an irregular trend is apparent toward an increase in rear zone draft with an increase in the weight of sliver fed without change in total draft. On Curves B and C, with a total draft of 17.40, a rear zone draft of 3.40 is indicated for a sliver weight of 25 grains per yard instead of the usual 10 grains.

(3) Insufficient weight segregation of the stock fed with respect to draft. No draft is specified for the weights of sliver fed from 50 to 55 and from 65 to 70 grains per yard. Range of weight is from 40 to 80 grains per yard, divided into three intermediate ranges of 10 grains per yard each as follows: Curve A, from 70 to 80 grains; Curve B, from 55 to 65 grains; and Curve C, 40 to 50 grains.

Poor quality roving resulted from the use of these draft relationships when using 1⅜-inch Wilds 13. This finding indicated the need to change the draft.

New Draft Guide. It was considered desirable to employ more advantageously the three elements of draft by means of new draft allocations. Tests of uniformity were performed using roving processed on the Super-Draft frame, and 150 combinations of draft (on 1⅜-inch Wilds 13 cotton) were used to make the roving for the tests.

Figure 2 shows the guide that was developed as a result of these studies.* The curve (A-B) of the shaded area designates the center of maximum roving uniformity for 2.00 to 6.00 hank roving. It was found that total drafts up to 33, properly allocated between the rear and front zones, could be used without appreciable effect on the roving; but with greater total drafts, regularity was significantly less. Best results were secured by using the stocks and drafts within this shaded area.

Roving counts produced according to the unshaded area varied less than roving made using the original draft guide. The new guide covers the draft range of the roving frame for from 2.00 to 6.00 hank roving for sliver fed weighing from 40 to 80 grains per yard.

Uniformity Secured with New Draft Guide. Substantially improved evenness has resulted since the new draft guide has been applied in the manufacture of two cottons with staple longer than 1 inch.

More regularity was secured in 4.00 hank roving made from 1⅜-inch Wilds 13 cotton. This improvement was significant as compared with the roving (shown in illustration) made using the first draft guide. All roving counts from 2.00 to 6.00 hank made with the new draft allocations showed similar improvement.

Table 1 shows the variation of roving made from the Wilds cotton in five counts from 2.00 to 6.00 hank. This roving was manufactured with the draft allocations within the shaded area of the guide (Fig. 2). Column 4 shows the improvement of uniformity in terms of decrease of variation resulting from using these draft allocations. The decrease of variation ranges from 27.5 to 46.9 per cent.

Yarns manufactured from a shorter, coarser cotton (1⅜-inch Stoneville 2b) showed a substantial improvement in evenness when graded by the Cotton Yarn Appearance Standards. Number 16s tire cord yarn, spun from roving processed from this cotton using the new draft guide, showed a decrease in skein strength variation of 41.5 per cent and a decrease in yarn number variation of 51 per cent.

The new draft guide has not yet been applied to the manufacture of cotton shorter and coarser than Stoneville 2b variety. The results obtained, however, indicate that improved uniformity may be secured by applying these drafts to the manufacture of short, coarse varieties.

This guide is not presented as a corrective measure for all conditions, but to serve as a pattern for improving product evenness by means of better draft distribution. The results indicate that improved draft settings may be a means of extending the use of the Super-Draft system to a wider range of products where uniformity is essential.

Manufacture and Test Procedure. A standard 8 x 4-inch Super-Draft roving frame was used to manufacture the roving for this study. Figure 3 is a schematic diagram of

* An 8 x 10½-inch photostat copy of this draft guide may be obtained without charge by writing the author at the address shown on the chart.

the compound drafting section. The range of drafts is as follows:

(1) BF, total or overall draft of the compound drafting section from 10 to 72.
(2) BD, front drafting zone (or section) from 4.00 to 12.00 with a draft constant of 360.
(3) EF, rear drafting zone (or section) from 2.22 to 6.66 with a draft constant of 200.

Spindle speed was 1,100 rpm and space between spindles was 7 inches. Top rolls were weighted by spring pressure; diameter was 1 1/16-inch OD; shell lint proof ball bearing; the front roll leather-covered, and the third and fourth rolls, Dayco** covered.

Bottom rolls were standard type steel, with a 1 1/8-inch diameter front roll; cradles, 50 m/m with leather top and bottom bands.

Manufacture of Roving. The Wilds 13 cotton was Strict Middling 1 5/16-inch staple, of good character.

During manufacture, temperature was maintained at approximately 75° F, and the relative humidity was 58 per cent. Both temperature and humidity were automatically controlled.

The production organization covered the following ranges: (1) Nine weights of sliver of 5-grain increments from 40 to 80 grains per yard were fed; (2) five counts of roving from 2.00 to 6.00 hank were produced from each weight of sliver; (3) total drafts on the compound drafting section from 13.00 to 43.25 were used; (4) drafts on the rear drafting zone from 2.57 to 6.25 were used.

Because the rear drafting zone performs the additional important function of a break draft unit, it was selected for the control of draft allocation, and proportionate draft changes were made in the front drafting zone to maintain the roving count. The total draft of the compound drafting section is the product of the draft of the front and rear drafting zones. A change in the draft of one zone obviously requires a proportionate change of the other in order to maintain the same total draft.

Each count of roving was made with a variety of combinations of rear zone and total drafts. The general procedure for processing each count of roving from each weight of sliver was as follows:

1. The count of the control sample with the draft allocations of the machine manufacturer's draft guide was established.
2. Roll settings, tension, and twist were then established by means of tests made by the Belger Roving Tester.
3. Upon settling these details the control sample was manufactured, and samples of the comparable count with the experimental draft allocations were made from the same sliver by merely reallocating the drafts.

By following this procedure, draft was the only change necessary to produce all of the samples of a given count of roving. In this way the differences of product uniformity of the counts were necessarily due to differences of draft allocation.

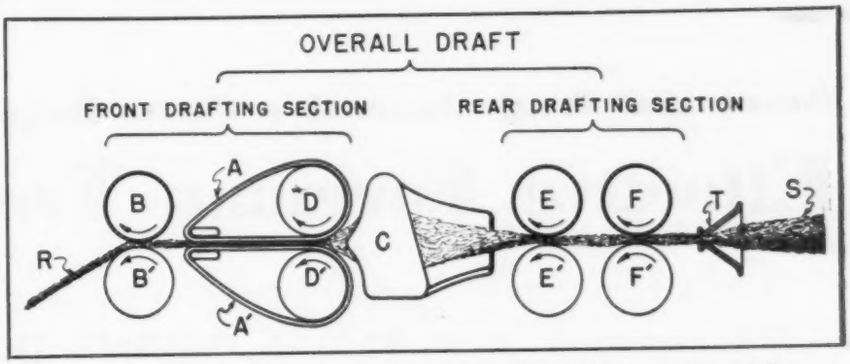


Fig. 3. Schematic diagram of the compound drafting section of the Super-Draft frame.

Figure 4 shows the different experimental drafts studied. Drafts of the rear zone (or back process) are shown on the left-hand scale and total drafts on the bottom scale. The combinations of drafts that were used are designated by the intersection of lines starting from the left-hand and bottom scales.

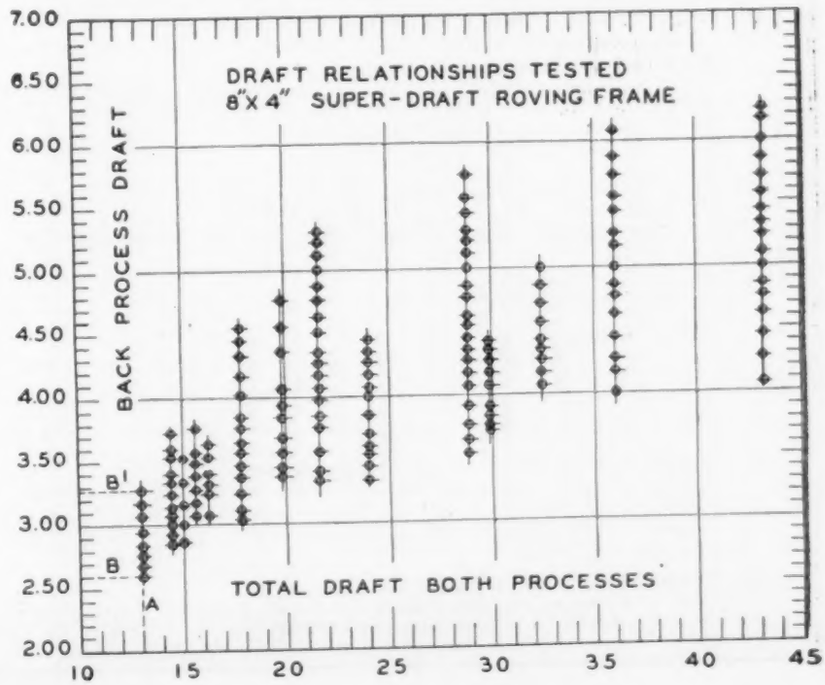
For example, assume that you wish to find the rear zone drafts used in combination with a total draft of 13. First find 13 on the bottom scale and follow a vertical line (A) to the first designated point. Then follow a horizontal line (B) from this point to the left scale which shows a rear zone draft of 2.60. The designated points from B to B' show the various rear zone drafts used in combination with the total draft of 13.

Evenness of Roving. The uniformity of each sample was recorded on a full length chart by the Belger roving tester. Evenness was determined from the recordings by two procedures: (1) The prescribed method which is by visual comparison of the roving tester charts; and then by (2) an improvised method of making unit measurements of the recording from which the coefficient of variation was calculated. These measurements were made from the charts of the roving tester with a template, and the values were read from the horizontal scale of the chart at 1/10-inch intervals. By this procedure, 75 numerical observations were made from each full length chart of 300 yards of roving.

Summary and Conclusion. Attempts to produce a satisfactorily uniform roving from long, fine-fiber cotton (1 5/16-inch Wilds 13) with the 8 x 4-inch Super-Draft roving frame were unsuccessful when using the available draft table. Resulting unevenness of roving was sufficient to cause considerable machine stoppage. Investigation disclosed long, fine-fiber cotton to be more sensitive to the influences of draft allocation than short coarse-fiber varieties.

(Continued on page 223)

Fig. 4. A chart showing some of the experimental draft studies that were performed in the laboratory.



Successful Wage Incentive Plans Require

Effective Foreman Training

By C. H. PETERSON, JR.
Time Study Engineer

A GOOD wage incentive system can be an asset to the company that has the initiative and interest to study the functions of such a system. An inadequately managed wage incentive program will ultimately fail, and it may be a potential source of trouble.

The lower levels of management can do much toward preventing the downfall of a project that has the merits and possibilities of a well administered wage incentive plan. If foremen are properly trained to aid in this undertaking, the achievement of success will be made much less difficult. They should be instructed and informed of the basic principles, merits, and possibilities involved in the plan.

The main objective is to acquaint the foremen with the basic fundamentals of your wage incentive plan. It is not necessary that they thoroughly learn the details of the system, but they should have a practical knowledge of the principles involved if the company is to secure the full benefit from the program.

When a company changes to a new type of wage payment plan, the foremen should be taught the plan before it is put into effect. When this isn't possible, classes and group discussions should be held soon after the new plan goes into operation.

There have been a number of books and articles published on the importance of foremen in wage incentive plans. "Time Study Fundamentals for Foremen," by Phil Carrol, Jr., is an excellent source of information. A course on this book can be helpful in putting across a wage incentive plan to foremen, provided the features of the program are included as progress is made.

Some companies have had an incentive system in effect for years and the foremen still do not know how the plan operates. Management can blame the foremen and the foremen can blame top management. One solution to the problem is a course such as the one outlined in the accompanying box.

This course has been taught to the foremen in one textile mill and the company has received benefits such as those listed below:

(a) Grievances are reduced.

(b) Less time spent answering employees' questions.

(c) Foremen make fewer errors in reporting employees' time.

(d) Off-standard operations are reported immediately.

(e) Foremen have helped improve methods of operation.

(f) Foremen are doing a better job of training new operatives.

(g) Foremen have become more cost conscious.

It is well worth the time and effort put forth to teach your foremen the fundamentals of your wage incentive plan.

SUGGESTED COURSE OF INSTRUCTION

I. Time Study
1. Define time study.
2. Explain principles.
3. Time study's aid in improving methods.
4. How the facts found through time study aid the foremen.
5. Its function in training learners.

II. Why Foremen Should Understand Time Study
1. Foundation for entire incentive system.
2. Means higher earnings for all.
3. It must be explained to rank and file workers.
4. Changes usually occur.
5. Top limits on earnings. When and why.
6. Time records must be correct.

III. How Time Studies Are Made
1. Time study is chiefly sales engineering.
2. Why people resent change and how to overcome this problem.
3. Use of stop watch.
4. Simple time study.

IV. Effort Rating
An entire session should be held on this as it is the one point most criticized by people who do not understand time study. It is an excellent idea to let all present do some rating. (Letting them rate the instructor on card dealing is very practical.)

V. Points of Your Particular Incentive System
Points should be brought out on which the employees are in doubt. Your time of labor analysis should be thoroughly explained. If the foremen earn premiums they should know how and why.

VI. Why System Must Function Properly
This is the final session and the point of economics should be brought forth in explaining the reasons.

Mandeville Mills Complete Installation of

EXCLUSIVE

Modern Yarn Dyeing Facilities

Staff Prepared

FOR MANY years yarn was dyed and processed in the dyehouse at Mandeville Mills, Inc., Carrollton, Ga., and the results were considered satisfactory. Developments in the field of dyeing, including chemicals, dyestuffs, and dyeing equipment, have brought forth some changes which the management has considered worthy of adoption. A new building and new equipment have been added to the yarn dyeing facilities at this mill.

The dimensions of the new addition to the dyehouse are 60 x 90 feet with high ceilings to accommodate modern mechanical handling equipment. The new structure is built of brick, and the old portion of the building is to be renovated for use as a drying room at a later date. Better lighting and ventilation are among the notable improvements incorporated in the new structure.

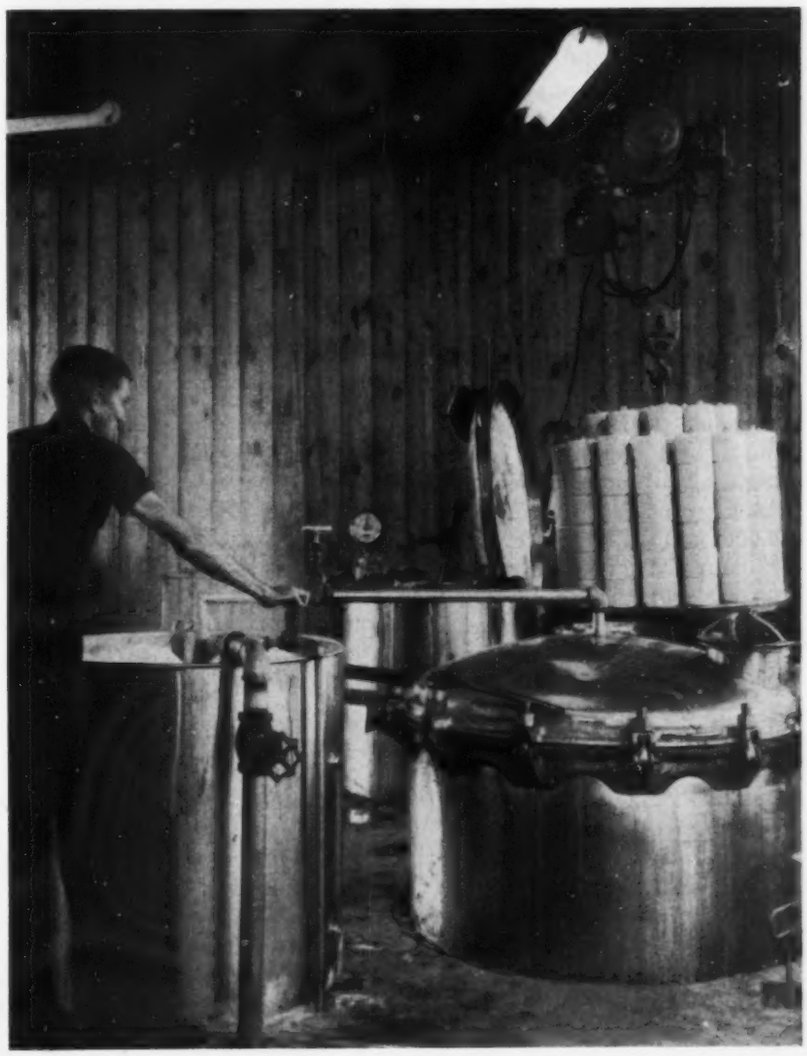
Materials Handling. Materials handling was a major problem in the old building. There was not enough overhead room to accommodate automatic mechanical handling equipment, and the machines had to be unloaded by hand which necessitated placing the dyed goods into crates and hauling them to the extractors. Mechanical handling operations are now performed by two electric hoists which are mounted on a monorail that travels around the outer edge of the room.

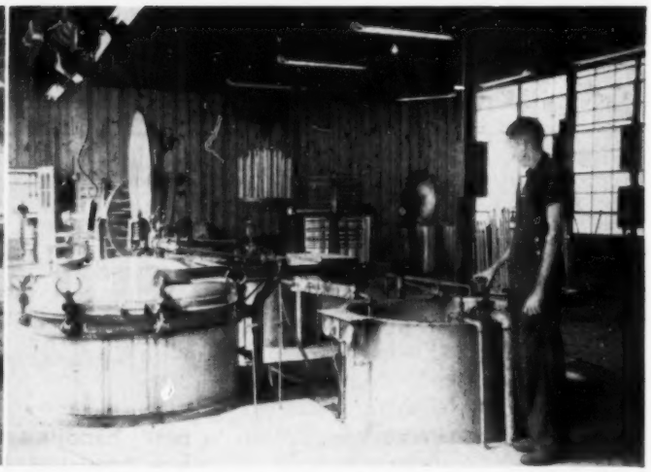
The carriers and yarn can be lifted and moved with ease by using the automatic controls on the electric hoists. The capacity of the hoists is 4000 pounds each. The mill engineer installed all of the new handling equipment which was furnished by American Monorail Company.

Laboratory. Samples are run in the laboratory to match the colored yarn samples submitted for duplication by the prospective customer. Some new equipment has been installed in the laboratory, and more is to be placed in operation within 60 days. Yarn numbers from 2s to 30s are manufactured and dyed for shipment from the Mandeville plant.

A new Fisher sample-drying

This view in the dye house shows some of the new stainless steel Burlington dyeing equipment. In the background, an operative is removing a batch of bleached yarn by means of one of the electric hoists which have greatly simplified the materials handling problem.





Left, a battery of Tolhurst centrifugal extractors in the dye house. Yarn wound on spring type carriers is extracted in these machines. All yarn wound on perforated paper tubes is extracted in a Smith, Drum extractor to prevent crushing the tubes. Right, the new type Smith, Drum 300-pound capacity stainless steel dyeing machine and expansion tank. Note the electric hoists on overhead monorail.

oven and a steam table have been added to the laboratory to facilitate quicker preparation of samples, and to eliminate the use of cast iron equipment in preparing samples. The sample drying oven is electrically operated and can be heated to 480 degrees F. It is usually operated at 180 degrees F. A new five-pound stainless steel package dyeing machine is to be installed in the laboratory to replace two old one-pound package dyers.

The drying capacity of the production ovens at present is 10,000 pounds per 16-hour day, but additions to be installed will soon increase the capacity to 15,000 pounds per day.

Dyeing. A Permutit water softening unit has been placed in operation to replace a smaller unit which processed approximately 30,000 gallons of water per day (12 hours). The new unit processes 100,000 gallons per 12-hour day. The additional supply of water is needed to take care of the additional yarn dyeing capacity of the new machines.

All vats, directs, naphthols, and bleached yarns are processed in stainless steel equipment, as are the developed colors which are prepared with five per cent sulphuric acid.

Most of the cast iron dyeing machines have been replaced with stainless steel Burlington equipment. Two 500-pound capacity dyeing machines of stainless steel construction have been installed. Another of these is on the way. Each 500-pound machine has two motors, each developing 25 hp, and two pumps delivering liquor to the yarn. Two motors and pumps are used to insure positive reverse flow of the dye liquor.

One stainless steel dyeing machine holds from 50 to 150 pounds of yarn; it is equipped with Worthington pumps and two G. E. motors of 10 hp each. The majority of the new dyeing machines have two motors and two pumps to circulate the dye liquor. The old machines were over rated and were not as efficient as the new ones.

Packages wound on perforated tube carriers and spring carriers are interchangeable on all new machines in this plant. The management stated that spring type carriers are preferred because a greater flow of liquor can be maintained when these carriers are used, and they do not wear or become damaged easily.

Two new type Smith, Drum 300-pound capacity stainless steel dye machines were moved from the old building to the new building upon completion. These machines have one 25 hp motor and one pump each. Large expansion tanks are provided to take care of variations in the amount of poundage dyed when it is necessary to increase the bath factor to compensate for the additional volume of liquor needed in the dye machine.

New Foxboro automatic panel controls have been connected to the steam lines to regulate the temperature and to change the flow of liquor and steam. Three panels control all Burlington dyeing machines. A basement was provided in the new building so that mechanics and repairmen can have easy access to the fittings and connections under the machines. No basement was available in the old building. A new dye storage room has been added to eliminate the dampness encountered in the old storage room.

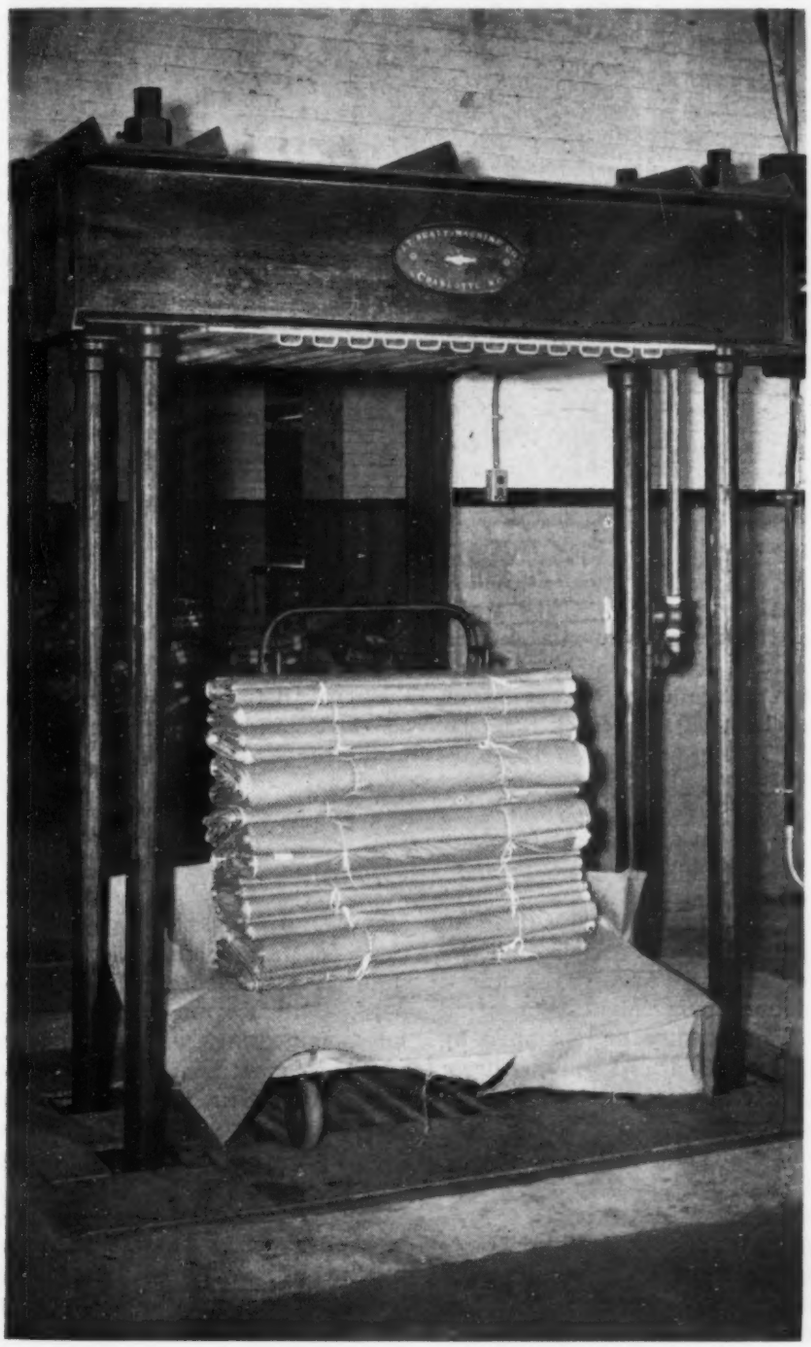
Extracting. One new Smith, Drum extractor for handling individual yarn packages wound on perforated tubes has been installed. This machine extracts 25 pounds of yarn in 1½ minutes. Formerly, a 200-pound capacity centrifugal extractor was used, but some of the perforated paper tubes were crushed. The machine previously used for the operation required 20 minutes to extract 200 pounds of yarn. A new 60-inch Tolhurst extractor is used to extract batches of 300 pounds of package yarn wound on springs. This machine handles one full batch in 20 minutes. All packages processed in the dye house weigh 1 to 2½ pounds.

A brick and concrete salt storage house was built to hold 80 tons of salt and includes a built-in brine tank which can furnish 3000 gallons of saturated salt solution per 24-hour day if necessary.

Platen on Hand Truck Simplifies Baling

Baling press platen equipped with wheels saves handling time of baled and unbaled goods, and reduces physical work of baling.

Bolts of cloth from cloth room are rolled directly onto press.



EXCLUSIVE

Staff Prepared

ACTING on the casual suggestion of a mill superintendent, J. T. Beaty, of the J. T. Beaty Machinery Co. and the Engineering Sales Co., of Charlotte, cooperated in the development of a baling press platen on wheels that saves handling time of both baled and unbaled goods, and reduces the physical work of baling.

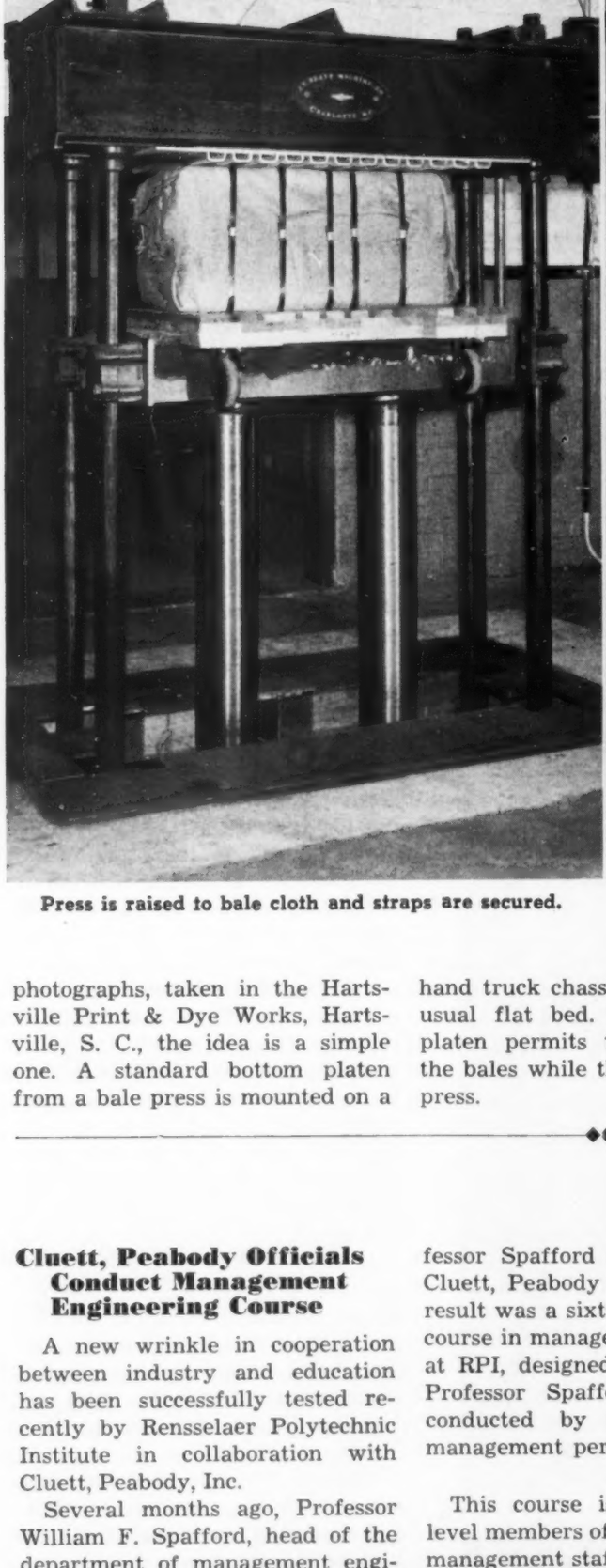
"Why not," asked the mill superintendent, "put wheels on the bottom platens of your presses, and let us use the platen, itself, as a hand truck? We could load the goods on the platen in the cloth room, pull it to the press on its own wheels, and bale it without unloading. Then we could take the bale to storage on the same truck.

"We would only have to load once in the cloth room and unload next in the storage room, completely baled. Now, we must load in the cloth room onto a regular hand truck, unload the truck onto the bale press, load the bale onto the hand-truck after baling, and then unload the truck in the storage room."

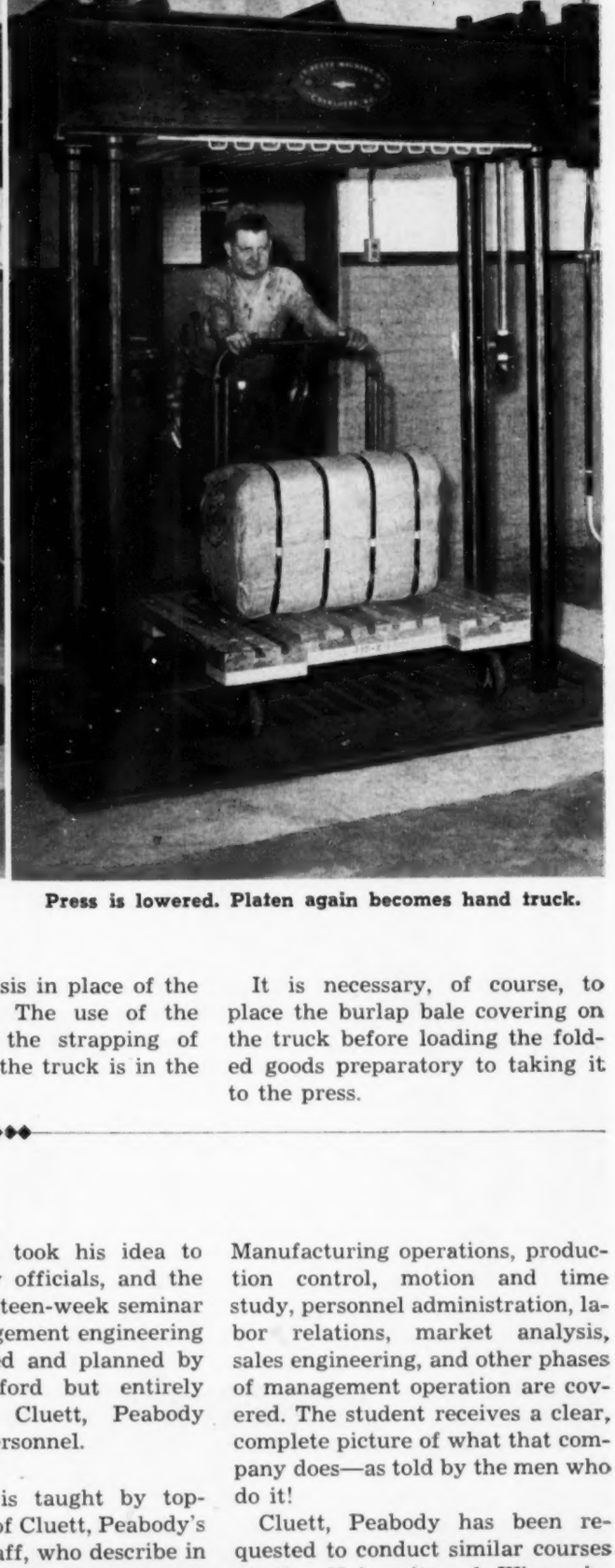
It sounded like a good idea, so Mr. Beaty took it to V. G. Brookshire, of Engineering Sales Co., and a good design was soon completed and arrangements made for the manufacture of the truck by Nutting Truck and Caster Co., Faribault, Minn.

Already, these hand-truck platens have been sold to more than two hundred mills using Beaty bale presses. In every instance the purchasers have noted a definite simplification of the baling process.

As may be clearly seen in the



Press is raised to bale cloth and straps are secured.



Press is lowered. Platen again becomes hand truck.

photographs, taken in the Hartsville Print & Dye Works, Hartsville, S. C., the idea is a simple one. A standard bottom platen from a bale press is mounted on a hand truck chassis in place of the usual flat bed. The use of the platen permits the strapping of the bales while the truck is in the press.

It is necessary, of course, to place the burlap bale covering on the truck before loading the folded goods preparatory to taking it to the press.

◆◆◆

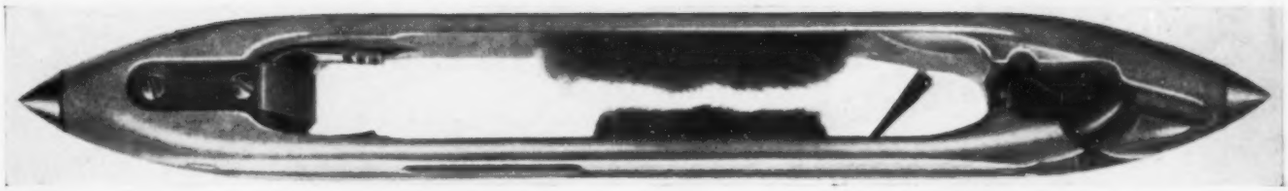
Cluett, Peabody Officials Conduct Management Engineering Course

A new wrinkle in cooperation between industry and education has been successfully tested recently by Rensselaer Polytechnic Institute in collaboration with Cluett, Peabody, Inc.

Several months ago, Professor William F. Spafford, head of the department of management engineering at RPI, was casting about for new ways to improve his management engineering program. Professor Spafford took his idea to Cluett, Peabody officials, and the result was a sixteen-week seminar course in management engineering at RPI, designed and planned by Professor Spafford but entirely conducted by Cluett, Peabody management personnel.

This course is taught by top-level members of Cluett, Peabody's management staff, who describe in detail their particular management function and illustrate their lectures by means of visual aids. Manufacturing operations, production control, motion and time study, personnel administration, labor relations, market analysis, sales engineering, and other phases of management operation are covered. The student receives a clear, complete picture of what that company does—as told by the men who do it!

Cluett, Peabody has been requested to conduct similar courses at the University of Wisconsin, Georgia Tech, and the University of Minnesota.



Steel Heddle Mfg. Co.

Shuttle Maintenance is Essential

in Producing Quality Goods

By B. L. JAUDON

EXCLUSIVE

ADEQUATE care and maintenance of shuttles is of primary importance in weaving quality fabrics. Some of the bothersome shuttle troubles are discussed in this article, and pointers on correcting them are offered. The author describes the usefulness of a handy shuttle kit for making minor repairs.

GOOD WEAVING depends largely upon the condition of shuttles. For instance, a shuttle running in a high speed loom with a loose tension ring screw would be disastrous to the warp yarn. An improperly tightened screw has a tendency to work loose while the shuttle traverses back and forth, and the result is a smash, which will require the assistance of extra operatives to remedy.

Some weavers are very much concerned about the condition of their shuttles. They generally check their shuttles for defects of any kind before putting shuttles into the loom. If any defects are found, the loom fixer is called to the loom. These weavers insist upon looms running in good condition.

Then again, other weavers are unconcerned; they will let the loom run until some serious damage is done.

Occasionally it will happen that a loom fixer will have a weaver in his section that is interested in production only. This type of weaver is a headache to the loom fixer. They usually try to patch up any defects on shuttles to prevent the necessity for spending some time on the shuttle in order to do a good job. They would rather let things ride along until something very serious occurs. Then, they are disgruntled because too much time is spent repairing the damage that was caused by their neglect to flag the fixer soon enough.

If those same weavers were to be called to the examining department and shown the defective cloth caused by defective shuttles, better results would be obtained in weaving quality cloth.

At times a loom will stop for filling breakage. It takes a fraction of a minute for the weaver to check the shuttles and find the cause of this breakage. It may be a knot in the filling yarn, or a low spindle, loose or matted fur, broken or cut tension rings, cut or broken eyes, cut pins, or a rough spot on the shuttle groove. Properly instructed operatives add a big advantage to the situation.

Shuttle Repair Kit. A loom fixer, when making minor repairs on shuttles, should have on his bench a small tray with compartments in it. This tray serves as a container for all small parts that are needed to make such repairs as replacing tension rings, pins, eyes, rubber bands, etc.

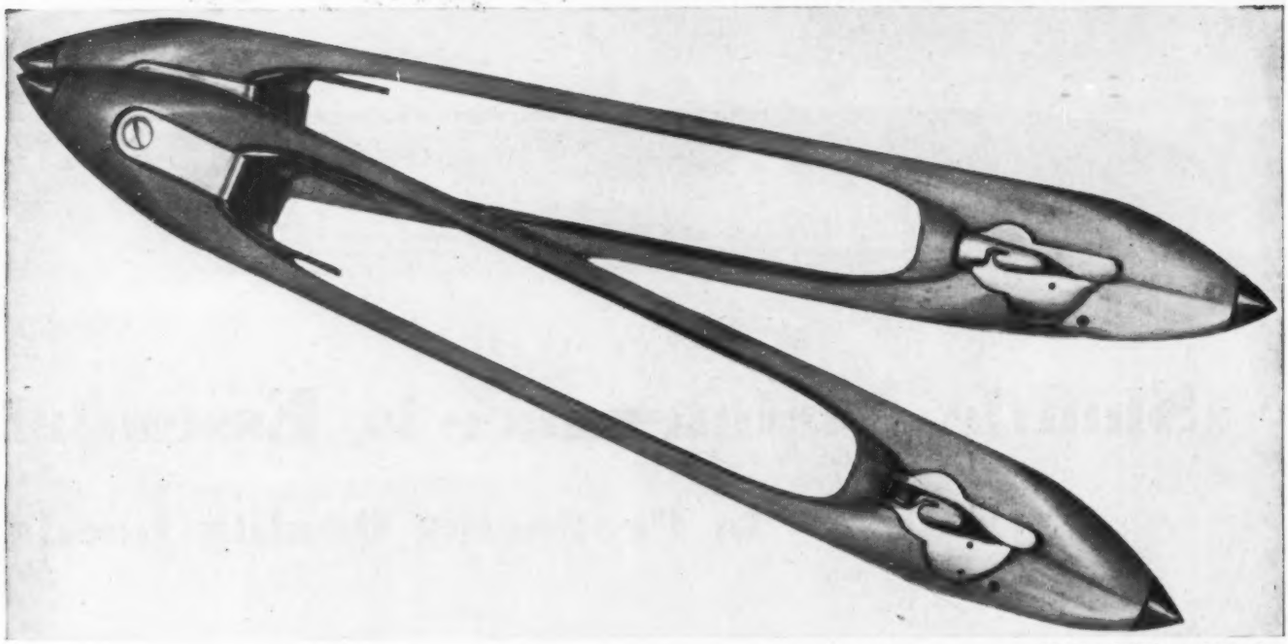
A slat from an old harness shaft is very suitable for making this tray, or it can be made out of sheet metal. The tray is approximately 12 inches long, two inches wide and one inch deep. The compartments are approximately two inches apart.

If the loom fixer is flagged and he finds that a rubber is broken, he would not be using good judgment to go to the shuttle fixer's bench to have the rubber replaced when he can do it himself in a minute at his own bench.

It would be a very good idea for the loom fixer to check the shuttles in his section periodically if time permits.

Remedy for Bad Fur. Bad shuttle fur should be examined to see if it can be restored to usefulness. A powder or talc worked into the fur and brushed thoroughly with a stiff brush will clean out the sizing and dirt.

Some of the loom fixers, who never have used this method of cleaning shuttle fur, will be very



Watson-Williams Mfg. Co.

Interchangeable shuttle eyes increase shuttle versatility. The upper shuttle is equipped with a regular shuttle eye; however, it may be equipped with a tension eye as shown on the shuttle below.

much surprised to notice the difference in the fur. By using talc and brush, the fur returns to its original soft texture.

Washboard Effect. A washboard effect on the back of the shuttles is generally caused by the reed being out of alignment, or too much flopping of the reed cradle. This condition will eventually break out dents in the reed, and the loom may require a new reed.

After the reed is lined up and the cradle is adjusted, the shuttle back can then be sanded down on a piece of garnet paper placed on a flat surface. Hold the shuttle firmly when sanding it or it will form a bow in the center, and will not travel straight when it is put in the loom. After it is sanded down, it can be finished with a finer grade of sandpaper.

Occasionally a loom fixer will have trouble in checking the shuttle in the loom; some shuttles will check properly while others will go into the box with a bang, and regardless of how hard he tries to overcome this condition, checking fails to help. The only remedy that will overcome this condition is to remove the shuttles from the loom and send them to the shuttle fixer to have each gauged and weighed.

Truing Shuttles. The preferred method for shuttle fixers is the use of a shuttle truing machine. Make sure the back wall and bottom of shuttle are perfectly flat. It is best to first true the bottom for a flat surface and then true the back.

After the shuttles have been trued, sharp edges should be rounded off. A scraper made from a discarded power hack saw blade is suitable for this purpose. Polish shuttles with a fine grit sandpaper or emery cloth; follow this treatment with a coat of shellac mixed with 10% oil. It would be best to apply shellac and oil on a piece of clean cloth and rub it on the shuttle to get a highly polished finish.

Whenever the shuttle fixer is checking over the shuttles for a new warp and he finds that some of the shuttles have cracks in them, mostly on the bottom, he should notify the loom fixer and have him check the loom while it is in operation. The loom may have too much pick or improper checking of shuttles can be the cause. Many things can be wrong with a loom which will cause the shuttles to crack or the points to come loose.

The shuttle fixer should have a work bench that will be convenient for his type of work. It should be made somewhat similar to a writing desk, with an opening in the middle. Two drawers at the top, and a supply cupboard on each side provides space to store shuttles. A series of shelves on the top of the bench will be very convenient for holding shuttles that have been repaired as well as those needing the shuttle fixer's attention.

This bench can be built with a frame of 2 x 4's to which ¾-inch plywood can be attached. The top should be of hardwood construction approximately 2 inches thick with a 2 to 3-inch overhang all around. The top of the frame can be strengthened with two 2 x 4's. Shelves, drawers, and doors can also be made of ¾-inch plywood.

Four drawer pulls, two latches and two sets of hinges is all the hardware that is required for this bench.

After the bench is completed, a medium size vise can be placed on either end.

With this arrangement, shuttle maintenance may be more efficiently accomplished. As a result, shuttles are kept in better condition and seconds due to defective shuttles are reduced to a minimum.

WINDING MACHINES——
Principles and Practices

Article 18

By JESSE W. STRIBLING
Universal Winding Co.

EXCLUSIVE

DEALT WITH in this article are: method of tensionizing the yarn on the Roto-Coner; different types of slubcatchers used—precision blade, MacColl, and Auto-Nip; how to determine slubcatcher settings, including a formula for finding the diameter of cotton yarns and a table of suggested settings; and the amount of tension to use.

THE METHOD of tensionizing the yarn on the Roto-Coner is by friction in passing the end between two discs, both of which are free to revolve with the yarn, although the bottom disc turns much more slowly than does the top disc.

The amount of tension to be applied is controlled by tension weights (washers), which are placed on top of the upper disc. A felt washer is used between the upper disc and the first weight to act as a shock absorber and to give a smooth tension. The tension weights are provided in three sizes: heavy, 299 grains; medium, 100 grains; and light, 55 grains. By varying the number and size of tension weights, almost any desired amount of tension can be applied to the yarn.

While the tension weights govern the *amount* of applied tension on the yarn, it is the *behavior* of the discs which governs the *evenness* of the tension. This behavior is controlled primarily on the lower disc, for if the lower disc is under control, the upper disc has to be under control.

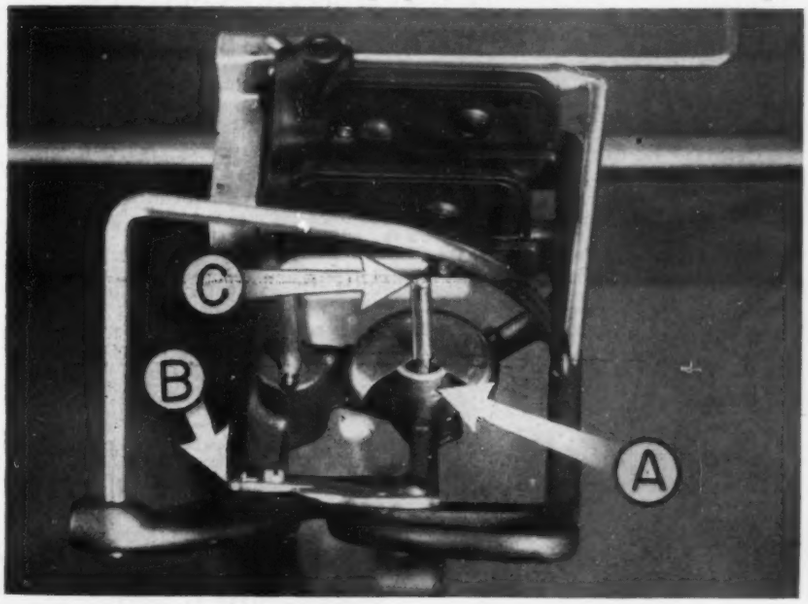
Both discs should be free to turn constantly, so that wear on their surfaces will be evenly distributed and to prevent accumulation of lint and trash between the discs, which would cause the upper disc to lift, with resulting loss in tension.

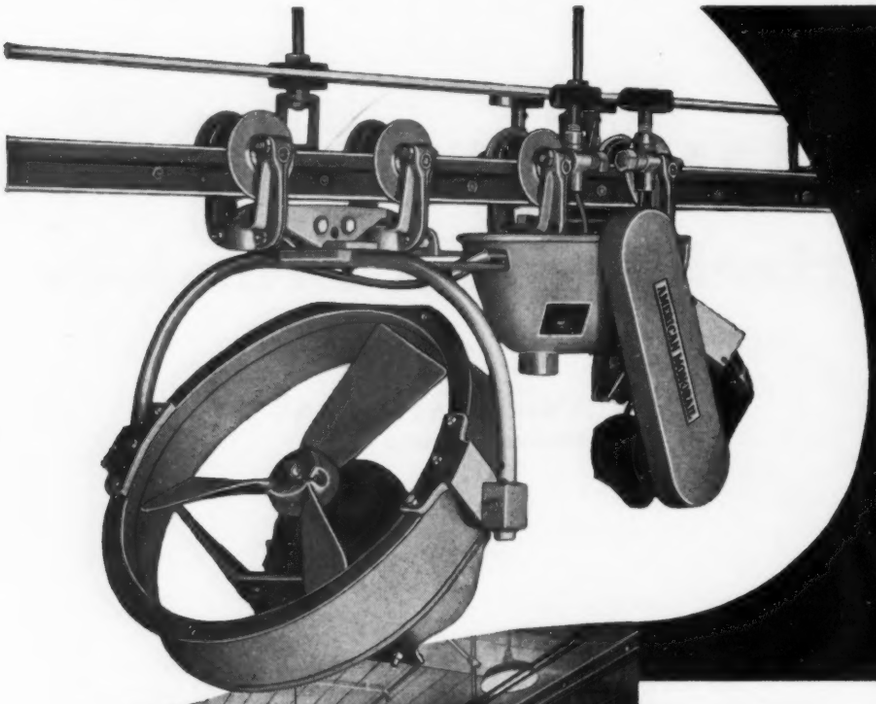
However, in most cases it is not desirable to have the discs spin too rapidly, because when an end breaks in the slubcatcher, the yarn is inclined to wrap around the disc pin, due to the momentum of the discs. Also, especially on coarse yarns with heavy tension weights, the yarn may be thrown out from between the discs.

Ordinarily, and when it is desired that the lower disc turn slowly, the lower disc rests on three supports which are part of the tension bracket, as seen in Fig. 105. When thus supported, the bottom disc will be turned very slowly by friction with the yarn.

In winding finer yarns, with lighter tension, a tension disc collar, shown at (A) in Fig. 105, is used to lift the lower disc away from the three supports, thus relieving friction and allowing the disc to turn more freely. One side of this collar is flat and the other cupped. With the flat side up (supporting the disc), the disc will turn freely even when tension is at a minimum; with the cupped side up, the tendency of the disc to revolve is reduced.

Fig. 105. Tension bracket on Roto-Coner, with lower disc cut away to show collar for controlling speed of lower disc in revolving.





Keep Ceilings Clean with AUTOMATIC CEILING CLEANERS

No Labor Cost
No Production Loss
No Ladder Accidents
No Fire Hazard

At a recent meeting of textile executives, twenty-four mills reported most common practice of blowing down ceilings once every twenty-four hours with frames running, or once a week when idle. This means lost production when the machines are shut down under the cleaners or extra time for cleaning labor.

ONE MILL REPORTED EXCELLENT RESULTS WITH AUTOMATIC CLEANERS!

Our engineers can show you how a simple high-velocity traveling fan unit can eliminate your ceiling cleaning problem entirely. Systems have been operating well over a year without blow down.

Write for copy of Bulletin CB-3 describing all the latest developments in Automatic Cleaners for Textile Mills.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

Further control of the speed of the discs in turning may be obtained by adjusting the guide plate (B) in Fig. 105. Moving this guide to the left will give more wrap around the disc pin (C) and will reduce the speed; moving it to the right will increase the speed.

It should be kept in mind that, since a drum winder is a constant-yarn-speed machine, there is no necessity for decreasing the amount of applied tension as the package builds up, as is the case on precision winders, where a differential tension mechanism is necessary.

As can be seen from Fig. 106, the yarn passes from the supply bobbin through the guide (B), then between the tension discs, through the slubcatcher, over the breakage lever (C), and to the rotary traverse.

Breakage lever (C) is held down by the yarn, and when an end breaks or the supply is exhausted, it will rise and stop the spindle by causing the package to be lifted from the rotary traverse. Adjustment of the breakage lever will be covered in detail later.

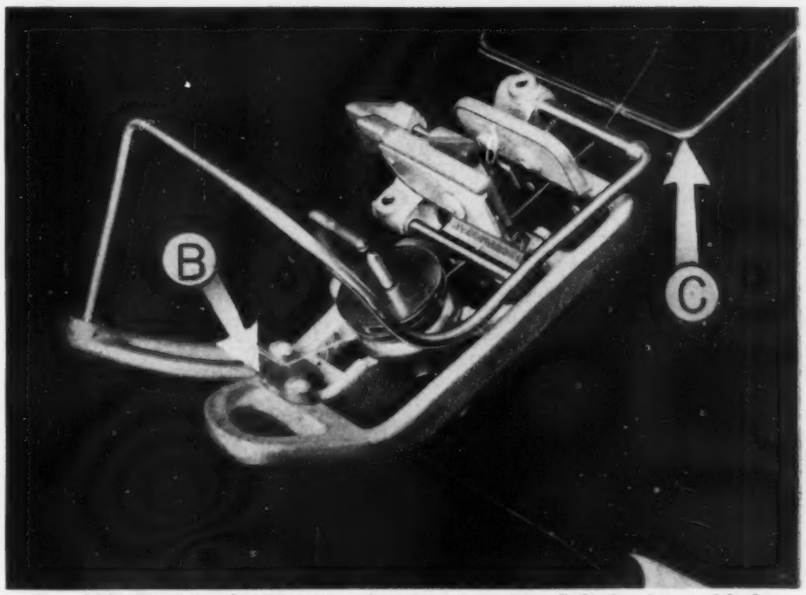


Fig. 106. Double slubbing tension bracket, MacColl in front, blade in rear, showing path of yarn through bracket.

Slubcatchers. There are three different types of slubcatchers available for use on the tension bracket of the Roto-Coner, and each type will be discussed separately.

Each type may be used individually, or two different types may be used together on the same tension bracket for double slubbing. However, a tension bracket made for single slubbing (either one of the three types) cannot be used for double slubbing, because there is not sufficient space for both slubcatchers to be mounted. If a machine is fitted with double slubbing tension brackets, two of the three types of slubcatchers may be used, one behind the other.

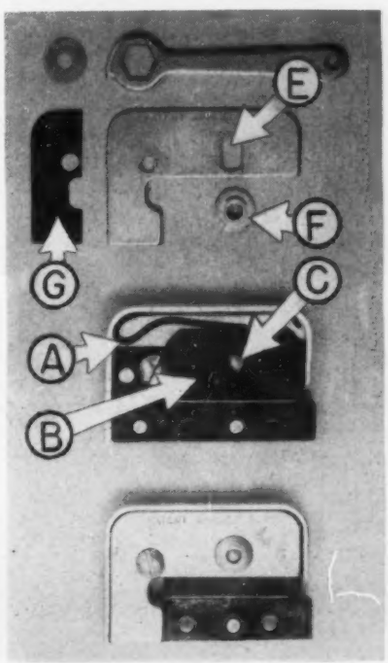
All three types involve the "precision" principle, in that the slubcatcher is set positively against a thickness gauge—obtaining the proper setting does not depend upon the "feel" of the operator.

Precision Blade Slubcatcher. Probably the most widely used of the three types is the precision blade slubcatcher, which consists of two hardened steel blades, with ground edges, between which the yarn passes. The method of setting is similar to that used for the precision cleaner, as covered in Article 9.

Figure 107 shows, at the bottom, the precision blade slubcatcher assembly and above, the individual parts.

As can be seen, the spring (A) is always pressing against the center of the movable blade (B). The shim (G) provides clearance between the cover and the movable blade to permit free movement of the blade when making the setting.

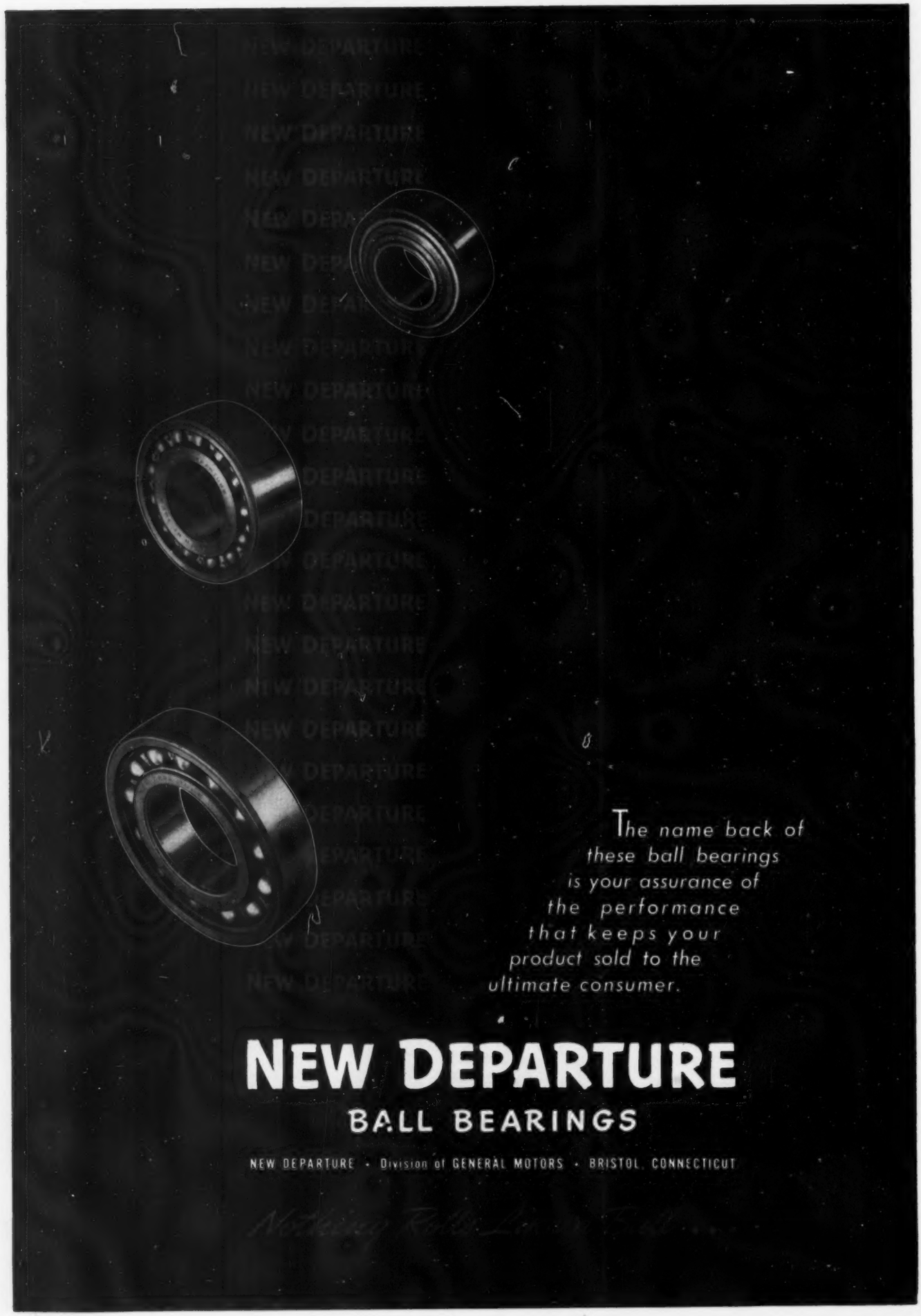
Fig. 107. Precision blade slubcatcher. Complete assembly is shown at bottom.



Lock screw (C) passes through a hole in movable blade (B) and screws into nut (F), which has parallel sides fitting into the elongated slot (E); this prevents the nut from being turned when the screw is loosened or tightened. The slot is long enough to permit vertical movement of the blade when making the setting.

The method of setting this slubcatcher is shown in Fig. 108, which is a view of the tension bracket as seen from above and slightly behind.

A special wrench, as shown, is used to loosen and tighten screw (A). Since this screw has a left hand thread, the wrench is turned to the left (counter-clockwise) to loosen. By continued turning to the left, the projection (B) on the wrench will contact pin (C), which acts as a fulcrum against projection (B). As the wrench is turned further to the left, screw (A)—and the movable blade of the slubcatcher—will be raised. A standard thickness gauge is inserted between and parallel with the two blades, being sure that the gauge extends the full length of the blades. Also, it should never be used obliquely. Then the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wrench is turned to the right, which permits the spring (A in Fig. 107) to force the movable blade against the fixed blade, with the thickness gauge between. Continued turning of the wrench to the right will tighten screw (A, Fig. 108) in its correct position. The thickness gauge is then removed.

It can be seen that, since the movable blade is pressed against the fixed blade by the spring, with the gauge between, the opening between the two blades will be exactly the same as the thickness of the gauge, and the edges of the two blades must of necessity be parallel. If the thickness gauge is not extended the full length of the blades, specially if it does not extend well beyond the screw (A), the two blades will not be parallel, because the movable blade is free to turn around screw (A).

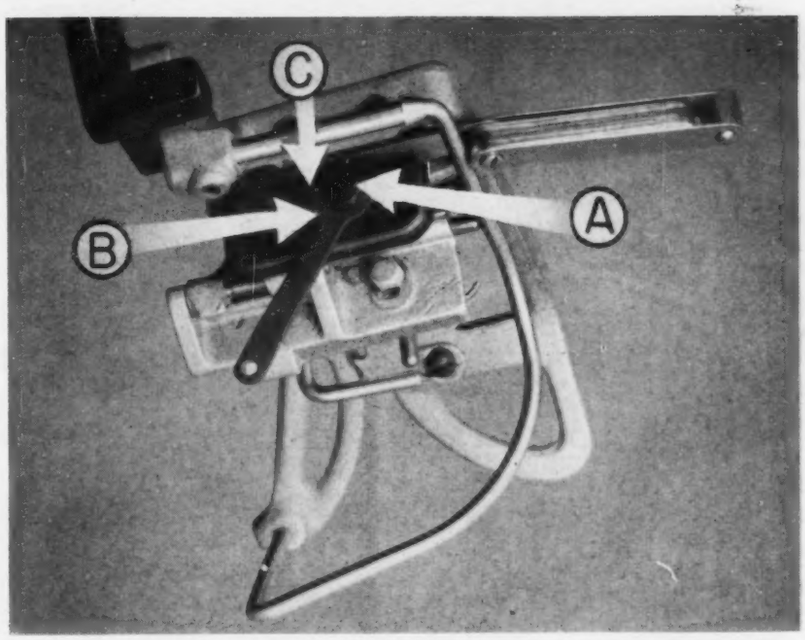


Fig. 108. Tension bracket, seen from above and behind, to illustrate method of adjusting precision slubcatcher with special wrench.

MacColl Slubcatcher. The MacColl slubcatcher is a row of needles mounted on a bar, the points of the needles being in a straight line. The row of needles is mounted on a suitable holder and is set at an angle to the anvil, so that a soft slub in the yarn will be impaled by the needles, and the yarn will be broken. The MacColl slubcatcher (usually referred to as the MacColl guide) is particularly effective on fine combed yarns. The disadvantage to this type of slubcatcher is that lint accumulates on the needles, and it has to be removed by hand, usually each time a broken end is tied up and each time a supply bobbin is changed.

Double Slubbing. While the MacColl slubcatcher can be used on a single slubcatcher bracket, it is more generally used as one of two slubcatchers mounted on the same tension bracket, as shown in Fig. 109. In this illustration, the MacColl slubcatcher precedes the blade type, and this is the method generally employed when double slubbing, MacColl and blade, is used.

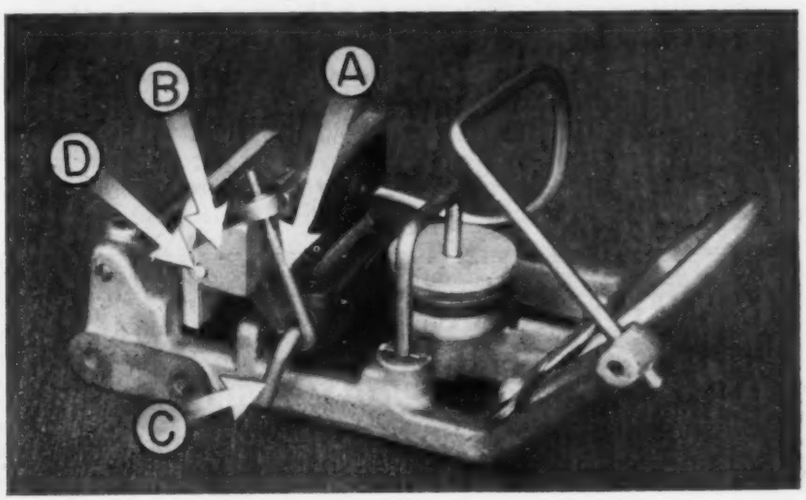
As was stated, lint accumulates on the needles of the MacColl slubcatcher, and sometimes this accumulation will gather to the extent that it may catch on the yarn and be pulled through the needles in the form of a loose bunch of fibers. That is why the blade type of slubcatcher is generally used behind the MacColl type, so that such bunches of lint, or fibers, will be caught and will not pass into the package.

The exception to this practice is in the winding of worsted yarns, in which case it is customary to have the yarn pass first through the blade slubcatcher and then through the MacColl. Most worsted yarn mills have found that better cleaning is obtained with this arrangement.

The MacColl slubcatcher is mounted on a bracket (B in Fig. 109) which is pivoted around pin (D) so that the needles can be raised away from the anvil for cleaning.

The method of setting the MacColl slubcatcher is exactly the same as for the precision blade type, except that a special clamp (A) is used to hold bracket (B) down against its stop (not shown in the illustration) while the adjustment is being made. This clamp (A) is hooked around bail (C), and the round nut is tightened against the top edge of bracket (B). This nut has a

Fig. 109. Method of adjusting precision MacColl slubcatcher, using clamp to hold assembly down.



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smooth outside edge, rather than knurled, so that it cannot be set too tight against bracket (B). The threaded end of the clamp is upset so that the nut will not come off.

With the clamp in position, and the nut tightened against bracket (B), the points of the needles are set against the anvil, with a thickness gauge between exactly as described for the precision blade slubcatcher. The clamp (A) is then removed.

The tension bracket for double slubbing is so made that the two types of slubcatchers, blade and MacColl, can be reversed; that is the MacColl type can precede the blade type, as shown in Fig. 109, or the blade type can be installed in the front position, with the MacColl type in the rear. In rare instances, blade slubcatchers are used in both positions (*see Fig.* 105).

Sometimes it may be desirable to use only single-blade slubbing where the machine is fitted with double-slubbing tension brackets. When this is desired, it is not necessary to remove the MacColl slubcatcher. The bail (C in Fig. 109) can be turned upward so that the end of the bail will contact bracket (B) and will keep it raised so that the needles are an appreciable distance away from the anvil. A set screw is provided to keep the bail in this position.

Auto-Nip Slubcatcher. A recent development in slubbing yarns is the Auto-Nip slubcatcher, designed primarily to inspect spun rayon and worsted yarns made on the American system of spinning. It has been found particularly effective in removing soft slubs, specially of the "torpedo" type.

The Auto-Nip slubcatcher is shown in Fig. 110. It is mounted on a suitable holder, pivoted so that it may be raised for cleaning, and the slubbing element consists of a small pivoted leaf, the lower edge of which has very finely tooled serrated teeth. This leaf is held against a steel blade by a coil spring, the teeth of the leaf extending slightly below the edge of the steel blade.

The steel blade has extensions on each side of the leaf, the bottom of the extensions being in line with the points of the serrated leaf.

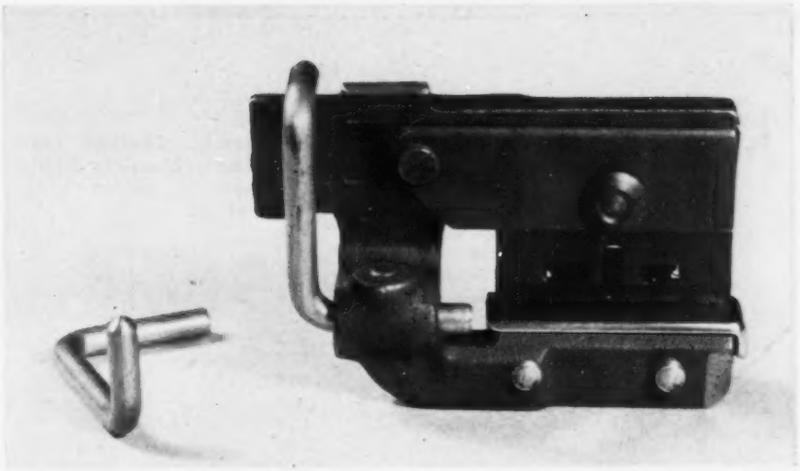

Fig. 110. Auto-Nip slubcatcher, used on Roto-Coner only, for worsted and spun rayon yarns. Clamp shown is used only when adjusting.

The method of setting the Auto-Nip slubcatcher is the same as described for the MacColl slubcatcher, a clamp being used to hold it down, as shown in Fig. 110. A feeler gauge is inserted between the anvil and the extensions on the blade which holds the leaf, being sure that the gauge extends the full length.

It will be observed that the leaf is held against the steel plate, and *away* from the anvil, by a coil spring. When a soft slub is detected by the serrated edge of the leaf, the leaf pivots downward, pinches the yarn against the anvil, and breaks the end.

The Auto-Nip slubcatcher can be installed on any standard Roto-Coner tension bracket; it was designed primarily for single slubbing but it may be used in conjunction with a precision blade slubcatcher for double slubbing, in which case the Auto-Nip always precedes the blade.

It should be kept in mind that on all three types of slubcatchers, the yarn does not run in one place but traverses back and forth as it is guided from one end of the package to the other by the rotary traverse. This helps to prevent accumulation of lint buttons and distributes the wear on the slubcatcher parts.

Slubcatcher Settings. It is probable that no two mills use the same slubcatcher settings, even for the same yarn counts. However, the basis for all slubcatcher settings is the diameter of the yarn. The formula for obtaining the diameter of cotton yarns follows:

$$\frac{1}{.90 \times \sqrt{840 \times \text{Count}}} = \text{Cotton Yarn Diameter}$$

Or, in simpler form:

$$\frac{.0383}{\sqrt{\text{Count}}} = \text{Yarn Diameter}$$

Table 13 gives the diameters of cotton yarns and suggested settings for blade and MacColl slubcatchers.

It will be observed that, for combed yarns, the suggested blade setting is 1.5 times the yarn diameter; and for carded yarns, the suggested setting for the blade slubcatcher is twice the yarn diameter. When using the MacColl (needle) slubcatcher, the suggested setting is three times the yarn diameter.

It should be repeated that the settings given in Table 13 are suggestions only; the correct settings for each mill will depend upon the type of material and the character of the slubs to be removed.

It is strongly recommended that the slubcatcher settings be not too close to the diameter of the yarn. If this is done, the slubcatcher will "scrape" the yarn and bits of trash and lint will accumulate. Eventually, a "button" will be formed and the end will be broken. In other words, when the slub-

TABLE 13

COTTON YARN SLUBCATCHER SETTINGS

Yarn Count	Yarn Diam.	Carded Yarn Blade Setting (Diam. x 2)	Combed Yarn Blade Setting (Diam. x 1.5)	Combed Yarn MacColl Setting (Diam. x 3)
1	.0383	.077	.057	
2	.027	.054	.041	
3	.022	.044	.033	
4	.019	.038	.029	
5	.017	.034	.026	
6	.0156	.031	.023	
7	.0145	.029	.022	
8	.0136	.027	.020	
9	.0128	.026	.019	
10	.0121	.024	.018	.036
12	.011	.022	.017	.033
14	.0102	.020	.015	.031
16	.0096	.019	.014	.029
18	.009	.018	.014	.027
20	.0086	.017	.013	.026
22	.0082	.016	.012	.025
24	.0078	.016	.012	.023
26	.0075	.015	.011	.023
28	.0072	.014	.011	.022
30	.007	.014	.011	.021
32	.0068	.014	.010	.020
34	.0066	.013	.010	.020
36	.0064	.013	.010	.019
38	.0062	.012	.009	.019
40	.0061	.012	.009	.018
42	.0059	.012	.009	.018
44	.0058	.012	.009	.017
46	.0056	.011	.008	.017
48	.0055	.011	.008	.017
50	.0054	.011	.008	.016
60	.005	.010	.008	.015
70	.0046	.009	.007	.014
80	.0043	.009	.006	.013
90	.004	.008	.006	.012
100	.0038	.008	.006	.011
120	.0035	.007	.005	.011
140	.0032	.006	.005	.010

catcher setting is too close, slubs will be manufactured by scraping the yarn, and this will not only increase the number of knots in the yarn but will increase the winding cost greatly.

Each mill should determine the types of slubs which should be removed, using blackboard tests with different settings of the slubcatchers. It will usually be found that the settings decided upon will be the yarn diameter multiplied by a factor. After these factors are determined, a chart, similar to Table 13, can be developed for the settings to be used on all yarn counts.

Amount of Tension to Use. There are differences of opinion among mill men as to the amount of tension which should be used on winding machines, particularly as to whether the tension should be heavy enough to break out weak places in the yarn.

Some mills prefer to use a light tension and depend upon pressure on the cone holder to obtain a satisfactorily firm package. Others believe that more tension should be used, in order to break out *all* weak places in the yarn. The latter do not take into consideration the fact that excessive tension at the winding machine may create weak places that will break down in the next operation, where the yarn may be under tension for a *longer time* than at the winding machine.

Yarn traveling under tension is something like a boy skating over a pond of thin ice. If he goes at high speed, he is safe; but if he skates slowly, the ice will crack beneath him. His *speed*, as well as his weight, is an important factor.

Yarn traveling at high speed can stand a great deal of tension without breaking, but the strain on the yarn may be causing the fibers to slip. This will create weak places and will probably be the cause of breaks occurring in a later process, where the yarn may be under tension for a longer period of time.

For example, suppose that the yarn is being wound at 750 ypm, which means that it is traveling about 12½ yards per second. Since the distance from the tension bracket to the package on the Roto-Coner is less than 15 inches, the yarn will be under tension for only 1/30th of a second. It can be seen therefore that, in this short period of time, it is very doubtful that all weak places in the yarn can be broken out at the winding machines. However, the yarn may be strained or the fibers may slip so that, in a later process, where the yarn is under tension for a longer period of time, it will break.

It can be seen, therefore, that the best practice is not to use tension as a means of removing weak places, but to use only enough, depending upon the strength of the yarn, for good package formation.

(Article 19, to appear in an early issue, will cover proper location of supply package; vertical supply; bobbin boxes and shelves; paraffin attachment, and dye package winding.)

Research on Wool Deemed Satisfactory

Satisfaction with the work being conducted on wool under the Research and Marketing Act has been expressed by the Wool Advisory Committee. The Committee recommended that available RMA funds be used for carrying out the important research and marketing studies already under way, instead of branching out into new activities in the immediate future. It was further recommended that mohair be included in analyses of prospective or desirable domestic production and consumption levels, in studies of fundamental research on animal fibers, and in technological investigations pertaining to weaving, felting or mothproofing.

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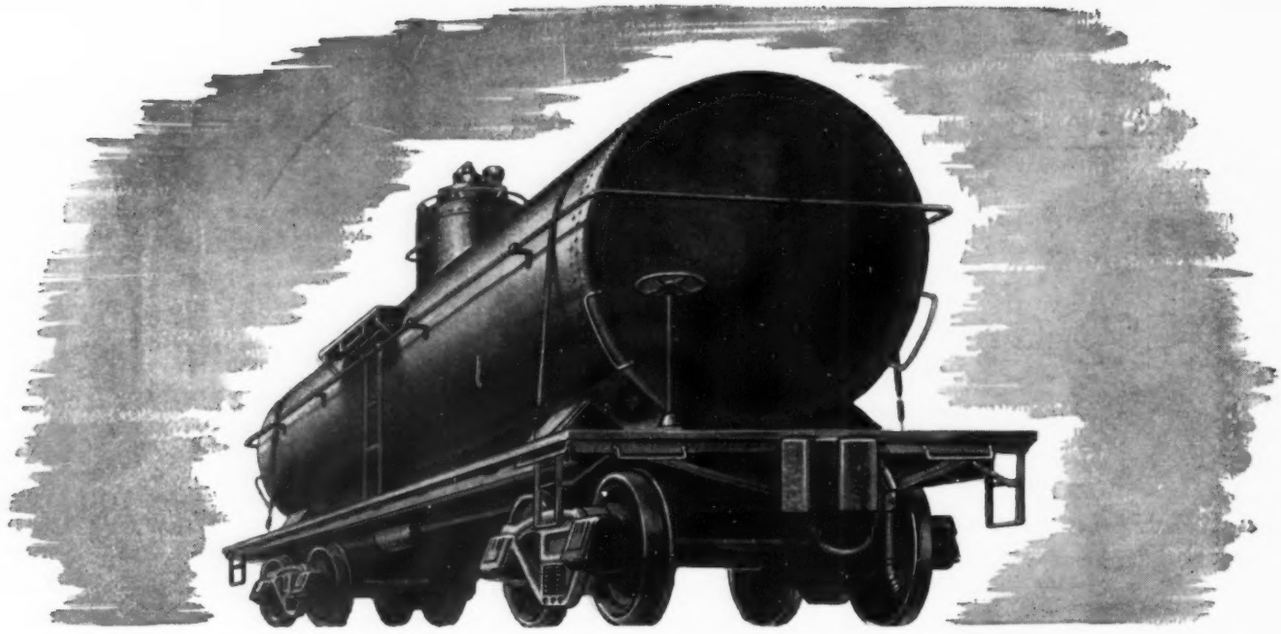

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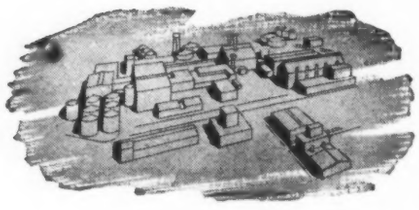
Descriptive literature—full specifications on request



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FOR THE TEXTILE BOOKSHELF

The Practical Art Of Color Matching (Calco Technical Bulletin No. 573)—by Wm. H. Peacock, Calco Technical Service Department. This bulletin has been in popular demand since its release several years ago.

A Laboratory Study of Padding. (Calco Technical Bulletin No. 808)—Part I: Cotton: by C. L. Zimmerman and G. L. Royer, Research Department.

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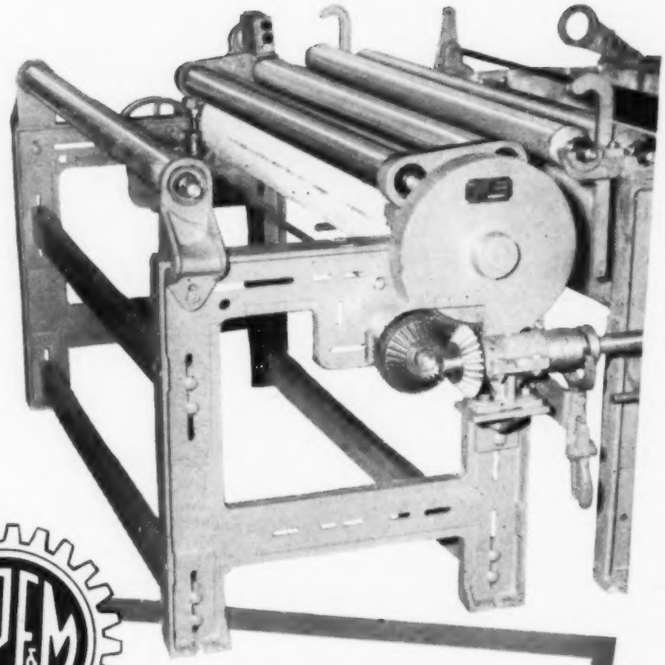

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Cotton Warp Sizing

Article 21 (Conclusion)

By PAUL V. SEYDEL, D. Sc.

EXCLUSIVE

A bibliography on cotton warp sizing and related subjects as prepared by the author of these articles.

WITH THE presentation of this bibliography on cotton warp sizing and related subjects, this series of articles on "Cotton Warp Sizing" by Dr. Paul V. Seydel is concluded. The series began in the August 1946 issue. It covered in detail the following subjects: the purpose and importance of sizing; a description of the material to be sized (cotton); the sizing materials; testing and analysis of materials; the sizing process; slashing hints; the sized material (properties of a well-sized warp, testing and analysis, weaving, defects and their remedies); slasher room equipment; and recent developments in cotton slashing.

The need for a practical bibliography on cotton warp sizing and related subjects is evident since much work remains to be done in that field. While this bibliography as prepared by Dr. Seydel is not 100% complete, it is sufficiently exhaustive to give a thorough coverage of the worthwhile literature.

The principal omissions are found in the patent literature, which experience shows is of little value in practical sizing. Also, very little literature more than 20 years old is quoted.

In an effort to simplify the use of this bibliography, it has been divided into sections as follows: Books (general); Analysis of Raw Materials; Analysis of Textiles for Chemicals; Analysis of Textiles for Physical Properties; Apparatus; Cotton: Its Properties and Constituents; Desizing; Miscellaneous; Sizing Materials; Slashing, Cotton; and Slashing, Rayon.

Microfilm copies and photoprints of literature cited in this bibliography may be obtained from the Library of Congress, Washington, D. C., and from the U. S. Department of Agriculture Library, Washington, D. C.

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Abbreviations of Titles of Publications Cited

Am. Dyes. Rep.—American Dyestuff Reporter
Am. Wool & Cotton Rep.—American Wool and Cotton Reporter
Anal. Chem.—Analytical Chemistry
Can. Text. J.—Canadian Textile Journal
Chem. Abst.—Chemical Abstracts
Chem. Zentr.—Chemische Zentralblatt
Cotton—Now designated Textile Industries
Deut. Textilwirt.—Deutsche Textilwirtschaft
Ind. Eng. Chem.—Industrial and Engineering Chemistry
(same) Anal. Ed.—Industrial and Engineering Chemistry, Analytical Edition
Ind. Text. J.—Indian Textile Journal
J. Am. Soc. Agron.—Journal of the American Society of Agronomists
J. Am. Chem. Soc.—Journal of the American Chemical Society
J. Home Econ.—Journal of Home Economics
J. Soc. Chem. Ind.—Journal of the Society of Chemical Industry
J. Soc. Dyers, Col.—Journal of the Society of Dyers and Colorists
J. Text. Inst.—Journal of the Textile Institute
Klepzig's Text.-Z.—Klepzig's Textil Zeitung
Mell. Textilber.—Melliand Textilberichte
Monatsch. Text.-Ind.—Monatschrifte der Textil Industrie
Ray. Text. Mo.—Rayon Textile Monthly
Rec. Trav. Chim.—Receuil des Travaux chimiques des Pays-Bas
Silk J. and Ray. World—Silk Journal and Rayon World
Text. Bull.—Textile Bulletin
Text. Ind.—Textile Industries (formerly Cotton)
Text. Mfr.—Textile Manufacturer
Text. Rec.—Textile Recorder
Text. Res.—Textile Research (now Textile Research Journal)
Text. Res. J.—Textile Research Journal
Text. World—Textile World

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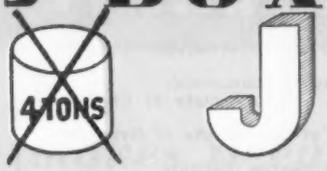

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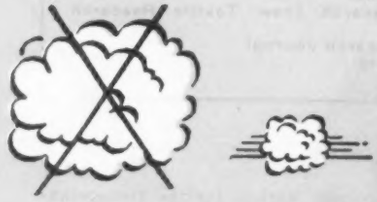

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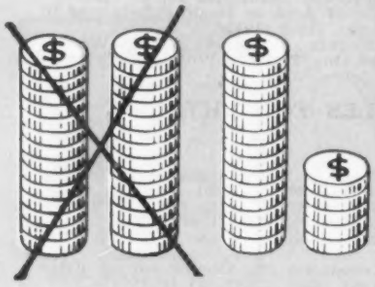

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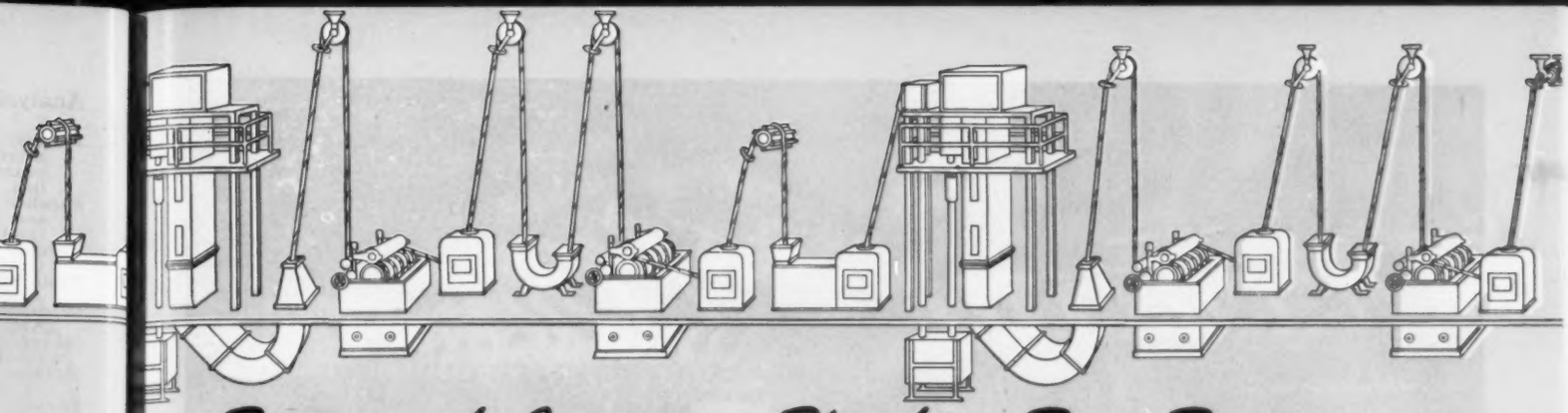
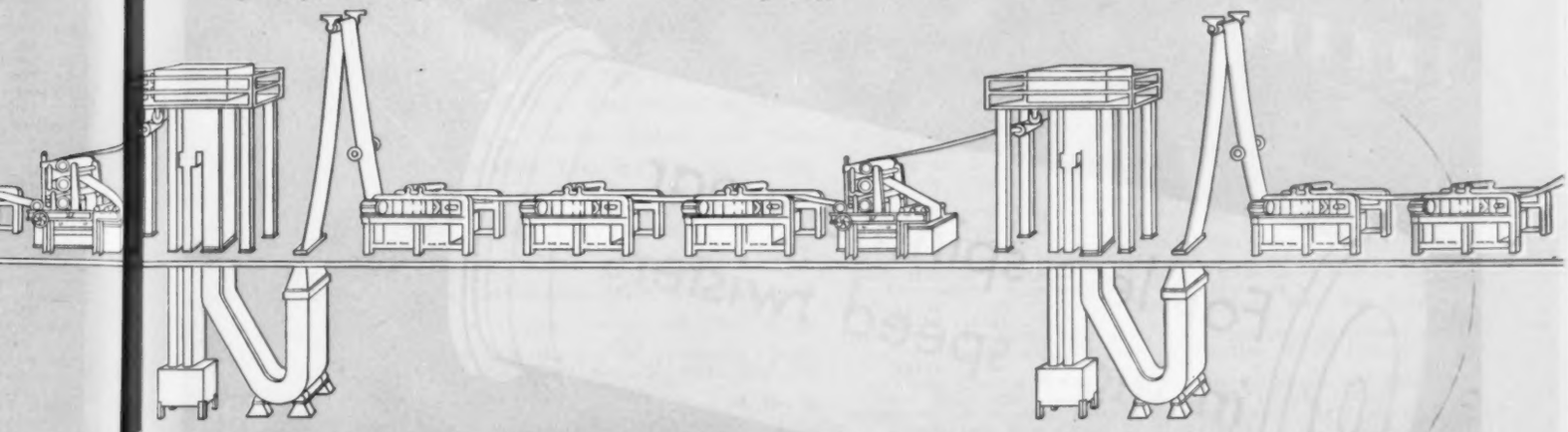


Butterworth Continuous Bleaching Rope Range (DuPont Process)

Cloth is washed in a Tight Rope Washer, passes through a Squeezer and enters a Caustic Saturator where it is impregnated with caustic soda solution. It goes through a pot-eye into the steaming tube of the J-box. After proper steaming, the goods pass directly into the J-box through special interlocking reels and plaitor mechanism and are folded in uniform condition front to back as well as across the width of the J-box. Cloth is next washed in a Tight Rope Washer, passes through a Squeezer and timing Scray, then passes through another Tight Rope Washer and Squeezer. This is followed by application of hydrogen peroxide in a Peroxide Saturator. Goods are then passed through a pot-eye, steaming tube and J-box, same as previously described. Goods pass through a Tight Rope Washer and Squeezer, thence into a Scray and finally are washed in a Tight Rope Washer and delivered through a Squeezer.



Butterworth Continuous Bleaching Open Width Range

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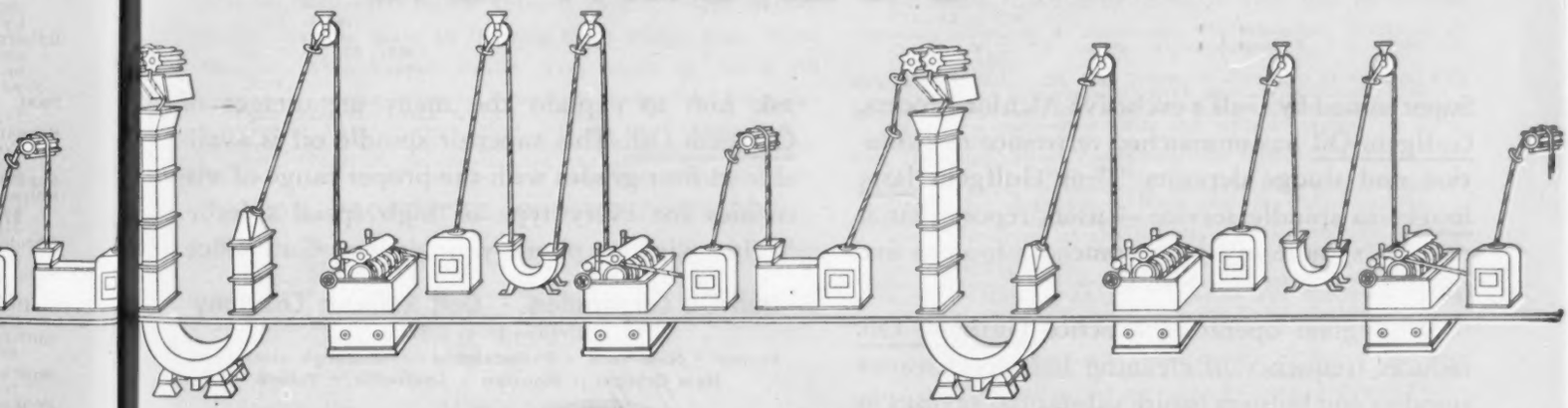
After washing in a 6-Roll Horizontal Washer, the cloth is passed through a Caustic Saturator, where it is thoroughly impregnated with caustic soda solution. Cloth is then steamed in heater tubes and plaited down into the J-box. Guide rolls are at the top of each leg of the heater tube. Leaving the J-box the cloth is thoroughly washed in three 6-Roll Horizontal Washers, which will bring the alkalinity of the cloth down to ¼ of 1%. Cloth next goes into a Peroxide Saturator where it is impregnated with a solution of hydrogen peroxide. The cloth now passes through a heater tube and goes on into a J-box where it remains for approximately one hour to allow the cloth to bleach thoroughly. Removed from the J-box, the cloth is given a final wash in two 6-Roll Horizontal Washers.



Butterworth Continuous Bleaching Rope Range (Becco Process)

Cloth is washed in a Tight Rope Washer and given maximum extraction in a pneumatic Squeezer before going into the Caustic Saturator. Here the cloth is impregnated with caustic soda solution. At the delivery end of the machine, two horizontal squeeze rolls with pneumatic pressure device and indicating instrument permit full knowledge of the pressure being applied. Cloth next goes through special interlocking reels and plaitor mechanism and is folded in uniform condition front to back as well as across the width of the J-box. Steaming compartments in the upright sections of the "J" and a small steaming unit in the bottom of the "J" are used according to the amount of goods in the J-box. Leaving the J-box the cloth is washed in a Tight Rope Washer, passed through a Squeezer and timing Scray, a small J-box for holding approximately 25 yards of goods. It then passes through another Tight Rope Washer and a pneumatic Squeezer where the desired extraction is achieved. This is followed by the application of hydrogen peroxide in a Peroxide Saturator. Goods are then passed through a pot-eye and into a J-box; taken through a Tight Rope Washer and Squeezer, thence into a Scray, and then another wash in a Tight Rope Washer and delivered through a Squeezer into the white bins.

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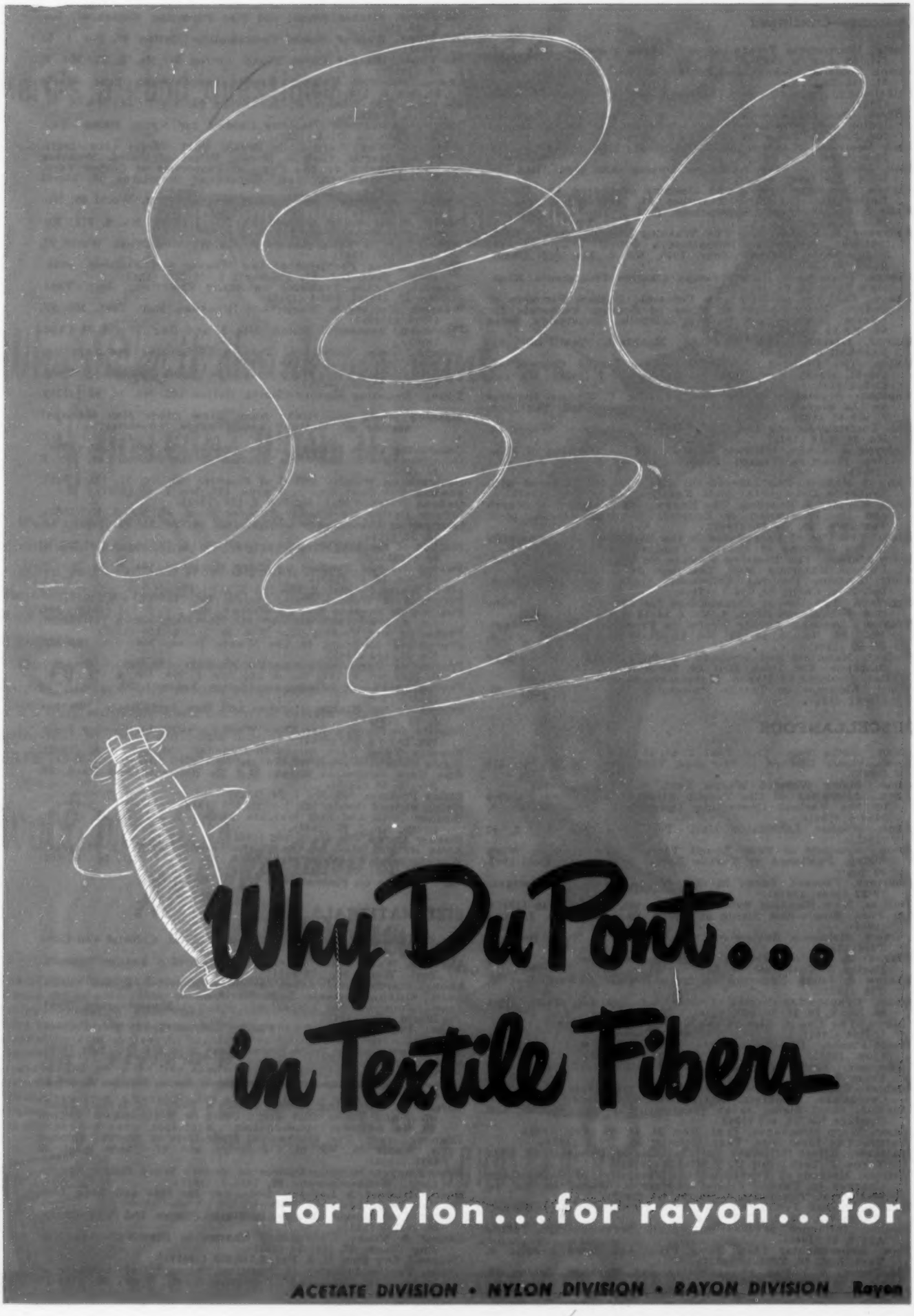
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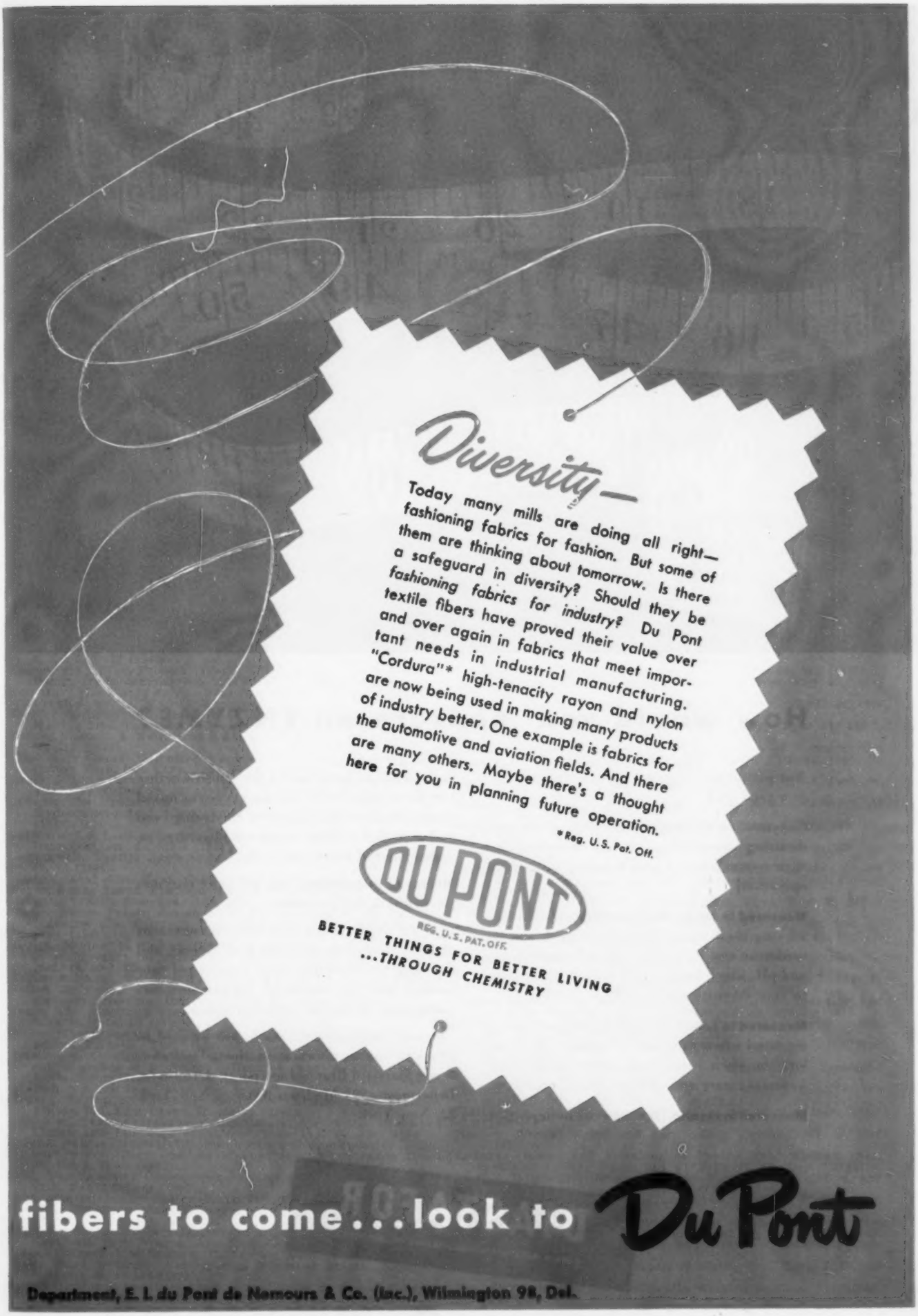
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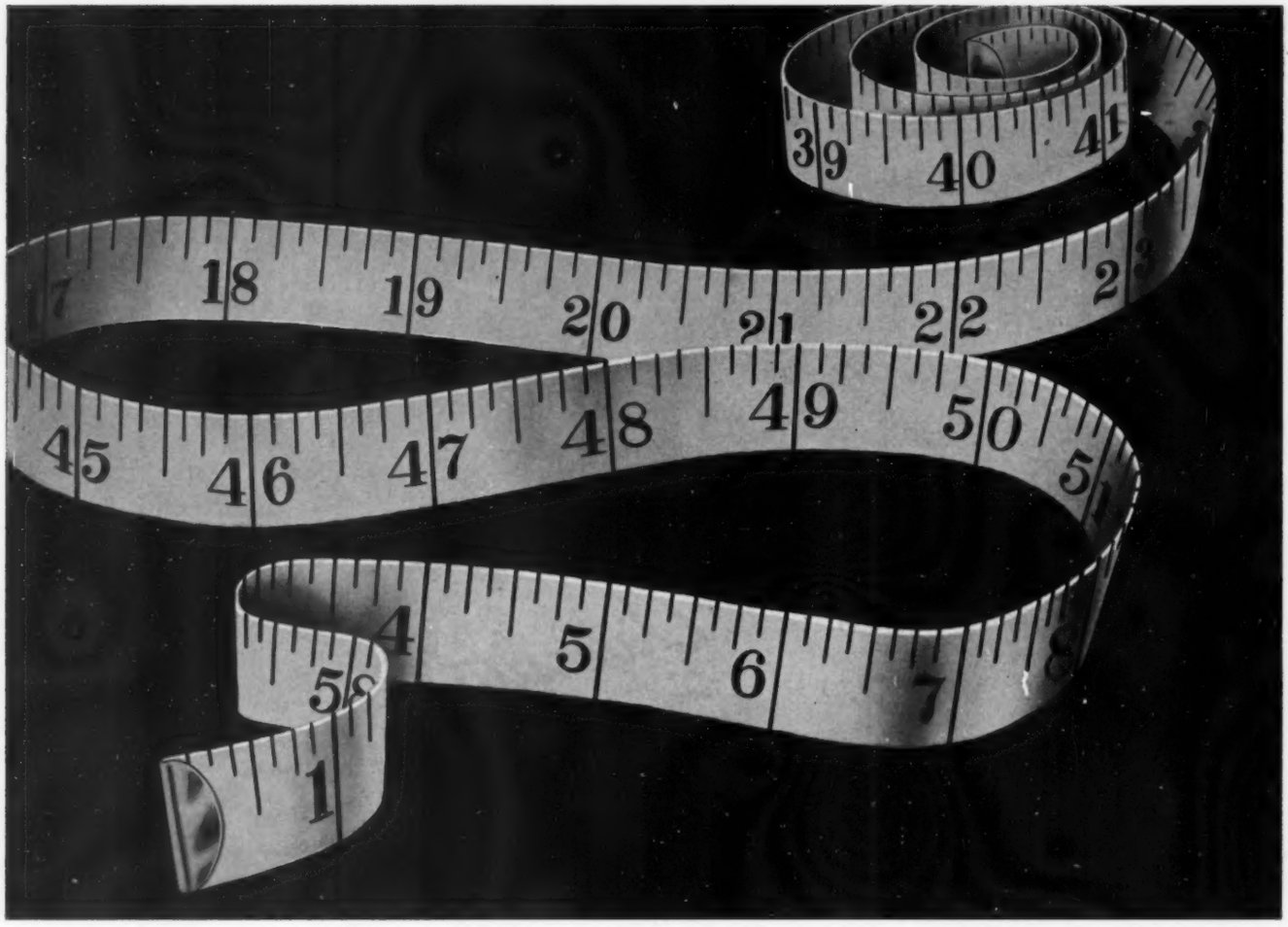

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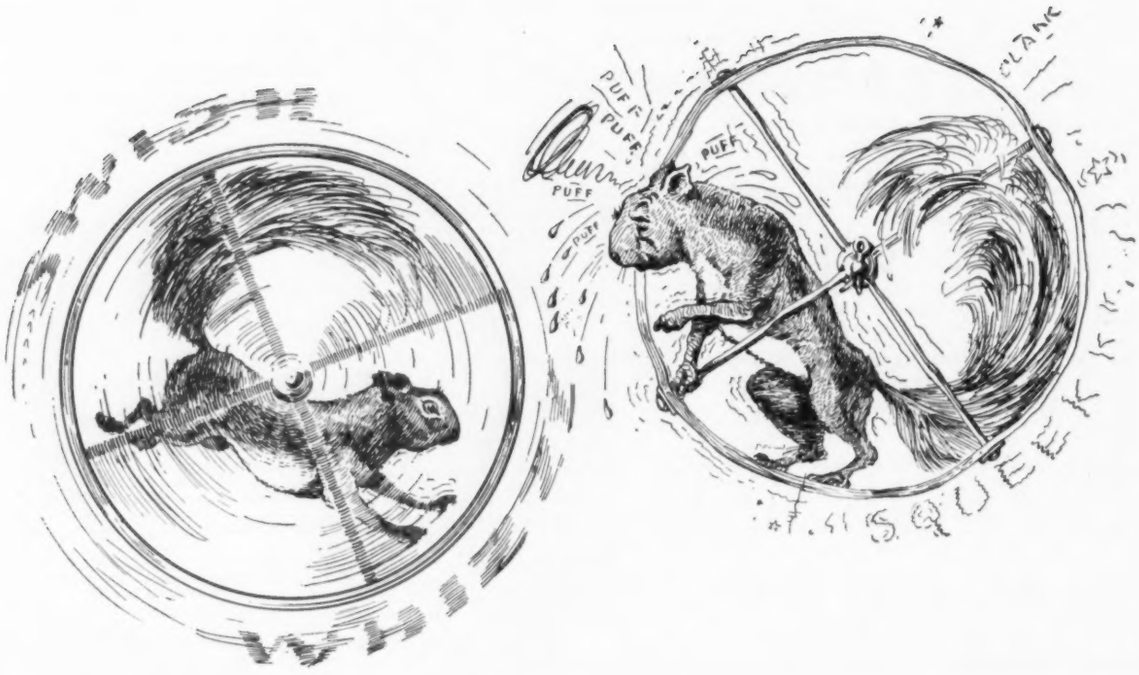

It's just another example of the importance of perfect balance. The balanced cage spins easily with almost no effort . . . the vibration set up when the unbalanced cage starts slows it down and quickly exhausts its user.

The same thing happens when you start your spinning frames. Unless all cylinders are perfectly balanced, excessive vibration reduces speed, interferes with quality, shortens the life of the cylinder, and often results in premature bearing failures.

For top performance and economical operation specify . . .

JENKIN'S *Dynamically Balanced* SPINNING CYLINDERS

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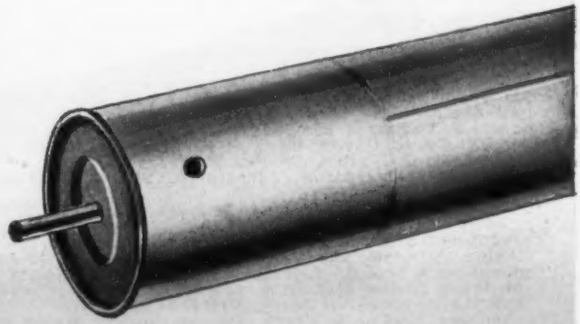


JENKINS METAL SHOP
INCORPORATED
GASTONIA, N. C.

Efficient Lubrication Program

Reduces Maintenance Costs

By S. H. BOYER
Wisteria Hosiery Mills

MODERN full-fashioned hosiery machinery is an intricate assembly of mechanisms. Many of them are designed to operate at high speeds, and some of them are subject to considerable variation in temperature and humidity. Frequently they must operate continuously for long periods of time.

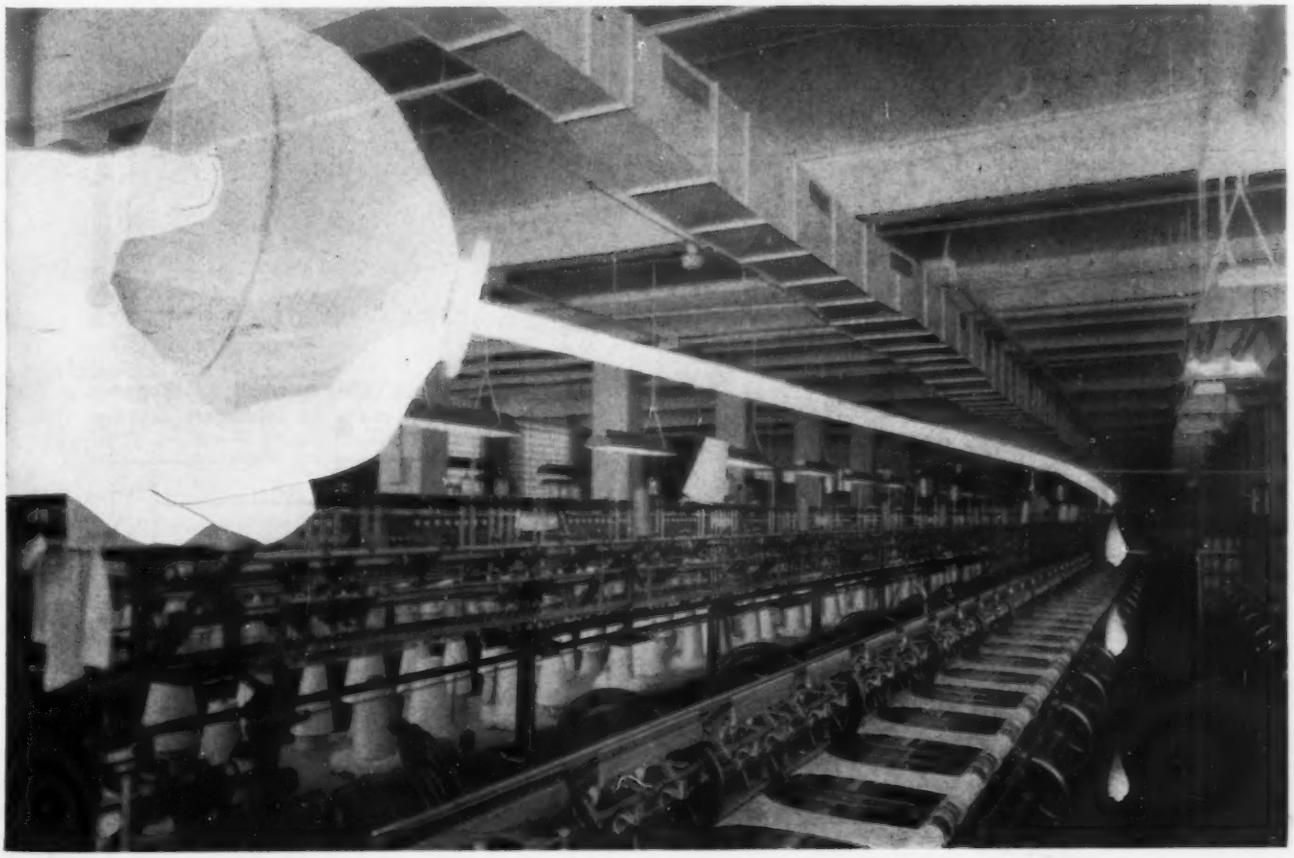
This means that lubrication becomes all the more vital when precision mechanisms are involved, and where failure due to abnormal wear might result in considerable expense, loss of time, or interruption of production schedules. Efficient operation depends largely upon proper lubrication and maintenance.

In working out an efficient and practical lubrication schedule, the officials responsible for maintenance in the mill should call into conference a lubrication engineer from one of the leading oil companies. They should consult a skilled specialist who can make qualified recommendations for correct lubrication.

To purchase all of the products that are recommended by the various machinery and equipment manufacturers would mean carrying a large stock of various kinds of greases and oils. It is generally known that there is no universal lubricant, but a simplified stock is possible if an engineer from the petroleum industry is consulted.

Lubrication charts and schedules should be prepared by supervisory personnel. Storage drums and cans should be kept free from contamination and mixing, and proper

A well planned lubrication program will provide savings in replacement parts and down-time for repairs.

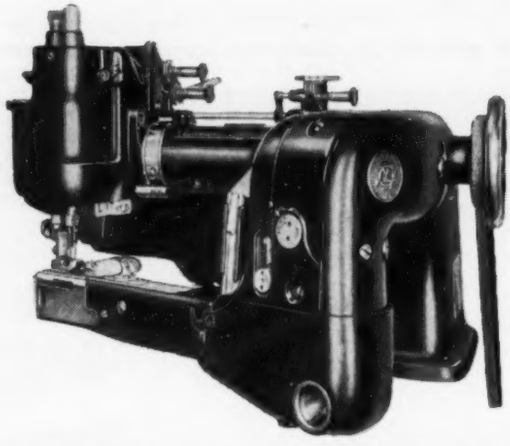


Here's why your operators can give you

MORE PRODUCTION

with less effort, on the

W & G "Feldlock"



The W & G "Feldlock" with Automatic Lubrication is AVAILABLE NOW . . . ready for immediate delivery.

The W & G "Feldlock" is a high-speed, high-precision, lap seam felling machine, designed for maximum operator efficiency and minimum maintenance.

It's Easier to Operate. Feed-Off-The-Arm design permits a more comfortable position for the operator—gives more room for handling the work.

Requires No Oiling. Fully automatic, forced-feed lubrication relieves operator of all oiling duties—assures correct lubrication of all bearings, for smoother, quieter operation.

Permits Sustained High-Speed Production. The machine is precision built in every detail—designed to maintain the highest production standards under modern mass production methods.

Minimizes "Down Time." Design, workmanship, and highest quality components all add up to longer, trouble-free performance year after year. And easy accessibility of all parts makes it much easier to clean and adjust.

For complete information on the many advanced design features of the W & G "Feldlock" machine, send for your copy of Bulletin No. 896.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 39th St., New York, N.Y.

methods of application should be practiced so that the lubricant will stay on the machines and off the fabric and the floor.

A full-time oiler has been employed in some mills to insure a complete job of oiling. Reduced maintenance costs have proved that it is far more economical to employ a competent person to do the job, rather than depend upon others who do not have the skill to do a satisfactory job of oiling.

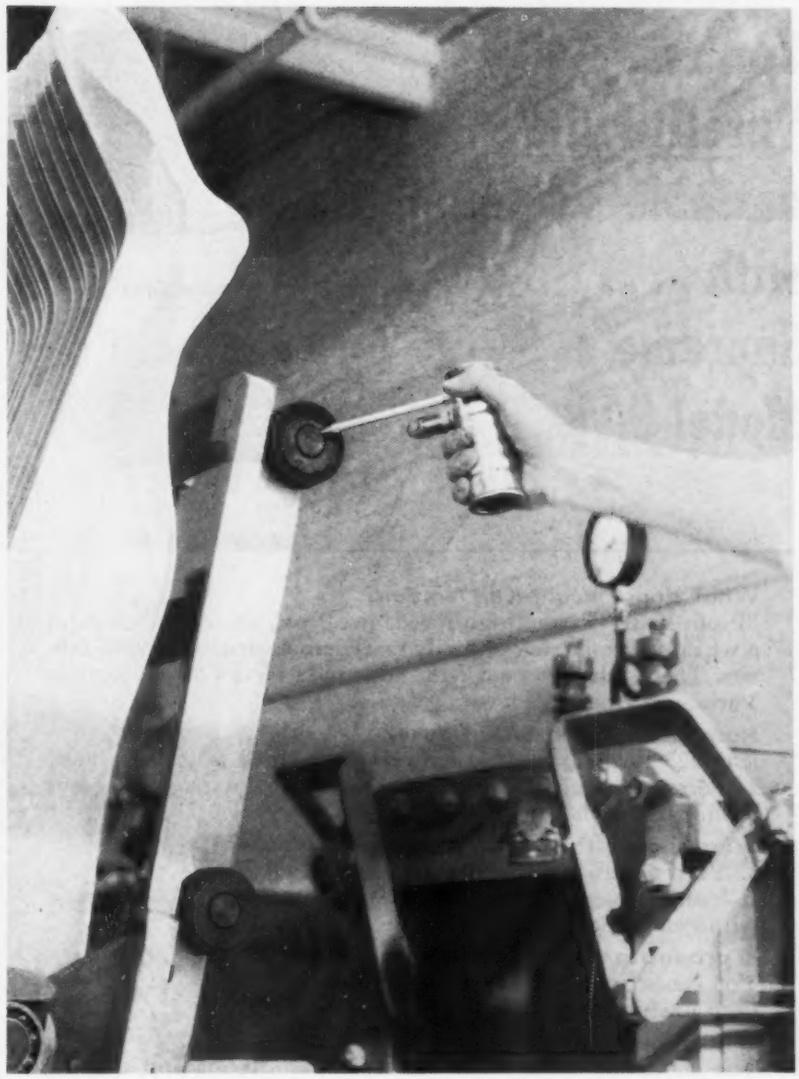
It is possible to equip every piece of machinery in a hosiery mill with drip catch pans and prevent oil and grease from dripping on the floor. All drums and cans that are in use should be placed on racks with drip pans underneath.

If a well planned program for lubrication is followed, the cost of maintenance and loss of material will be greatly decreased.

An electrical grease gun is a good tool for getting grease into a tight bearing, and if properly used, it will pay for itself in labor savings. Excessive lubrication should be avoided at all times.

The degree of success with lubricants in the textile industry to some extent depends upon how closely maintenance personnel can follow the recommendations of the machinery builder, the bearing manufacturer, and the lubrication engineer.

The golden rule of lubrication is: The proper amount of lubricant, of the proper type, in the proper place, at the proper time.



A pressure type oil can may be used to advantage when applying oil to closely fitted bearings and into small crevices. This type of can directs the lubricant to the place where it is needed.

◆◆◆

Knitwear Buyers Are Still Cautious

It is indicated that many buyers of knitwear, including wholesale and retail outlets, may continue for a time to exercise caution in ordering merchandise for deliveries far ahead. Arrivals of buyers as chronicled during the past thirty days in leading eastern centers increased materially since latter part of last year. But after shopping around more than customary, they usually placed orders only for nearby shipments.

Seasoned distributors are not too much concerned, as they count on buyers to return next month or later after they have fully appraised their individual position and the general outlook, and at such time they probably will make commitments further ahead. While there has been some ordering of fall goods, most retailers are not expected to plan that far ahead, and wholesalers also seem reluctant to go beyond spring.

One reason for this is that distributors in general feel there may be more price concessions in the offing. Others are thinking of their inventories which in some localities are said to be too heavy.

Knitwear manufacturers usually are closely informed as to inventories of their customers, and their opinion is that considerable progress has been made since last fall in clearing distributors' unwanted supplies, especially staples. By this time, manufacturers assert, wholesalers have worked their stocks onto the "thin side" in some respects, and it looks as if they want to maintain such a position so as to influence the retailers who think there still are plenty of goods in wholesale warehouses and to induce manufacturers to grant additional price concessions.

You can "profit-knit" variable stripes with . . . Supreme's Model SA

What does "Profit-Knit" mean?
"Profit-Knit" means high-speed, non-stop, uniform, "clean as a whistle" production of easily marketable variable striped fabrics. That's what you get with Supreme's Model SA Automatic Variable Striper.

How fast will the SA Produce?
Knits 25 yards of multi-color variable striped jersey per hour. 24" diameter machine operates at 24 R.P.M. with all 16 feeds producing *all* the time.

What makes this high production possible?
1. Yarn stand is stationary; cylinder and take-up revolve.
2. Unique, concealed method of camming permits color change without *any* slowdown.

Is production affected by stripe selection?
You can stripe in one course or a million courses–yet all feeds keep knitting. Up to 4 colors on each feed.

What does "non-stop" mean?
The stationary yarn stand principle permits loading double-tied cones. 24 hour operation without cone replacement.

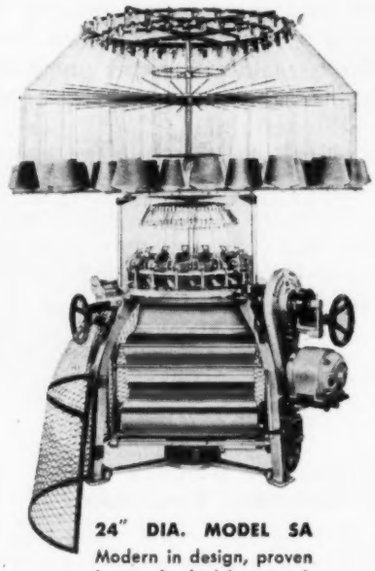
What is "clean as a whistle" production?
Fabric made on the Model SA has no braid of waste along the seam. Easier finishing, too.

Why is SA fabric "easily marketable"?
Uniform, even stitches maintained throughout. New type spreader lines up stripes so that they go on the roll-up straight. Simplifies finishing and matching.

Is the Model SA easy to operate?
Rotary drum method makes selection of width and variation of stripes quick and easy. Camming method eliminates "rifle shot" noises when color changes; gives you a quiet mill.

What about pattern wheel work?
The SA is built to receive the necessary parts for a quick changeover to a Model SA-ROF for 3-Position "Floatless" plaids, checks and designs.

How can further information be obtained?
Simply write, wire or 'phone for complete, free information.



24" DIA. MODEL SA
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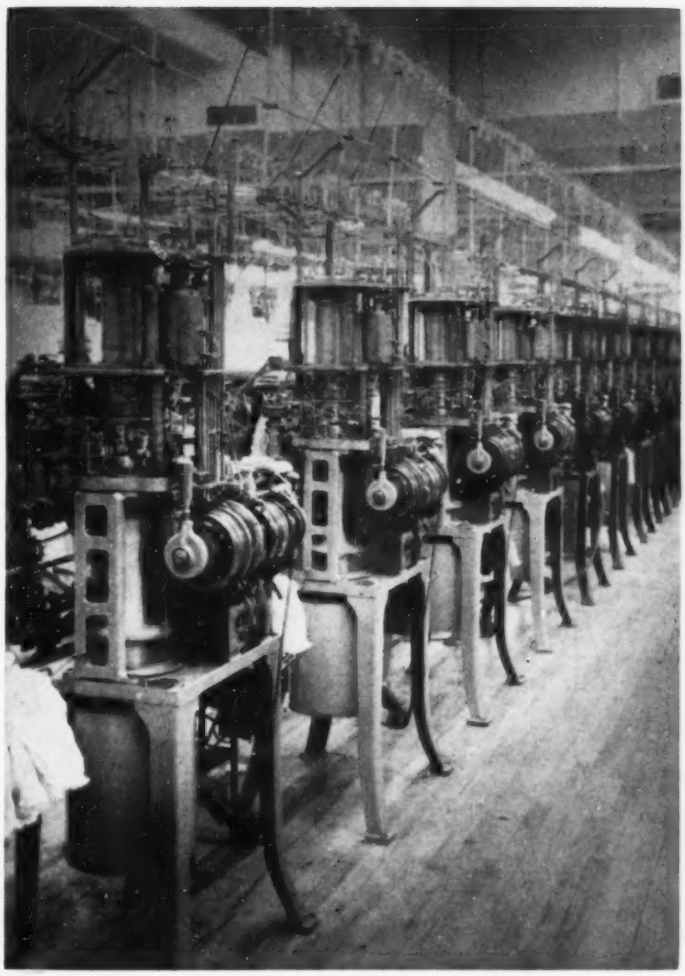
Visit us at Booths 219, 220, 221, 234, 235, 236, Knitting Arts Exhibition, Atlantic City, N. J., U. S. A., April 25th to 29th.



Preventing Trapped Latches

By DON NUMAN

EXCLUSIVE

BROKEN latches often show up in the pattern after the needle has been transferred to the top cylinder. The author has chosen the 132-needle, four-inch Komet Links and Links machine to make his references specific.

LATCHES trapped on Links and Links machines have been described by some fixers as a "common cold." Broken latches, which show up in the pattern right after the needle has been transferred to the top cylinder, can cause excessive consumption of needles in addition to being a time consuming source of trouble in production.

Transferring operations on both Links and Links and plain two-feed Komet machines are much the same. In many mills both No. 5202 and 5204 needles are used, but in some instances No. 5202 needles are preferred. The damage usually takes place at the first 1 x 1 up transfer or at the double transfer, and sometimes damage occurs at both places. Trapped latches do not occur frequently at the down transfer points.

A few years ago some new Links and Links machines were observed with trapped latches at the up transfer points while patterns were being made. These Links and Links machines have been operated on plain work and patterns, but at no time has there been any cause of damaged latches which was not overcome. Therefore, the causes of trapped latches should not be regarded as a difficulty that cannot be corrected.

Machine Speeds. In one mill the plain machines are operated at 150 rpm using the high speed pulley, and the Links and Links machines are operated at the same speed when making plain work. On pattern work the L & L machines are operated on the slow speed pulley (which is customary). This gives a speed of 100 rpm on both types of machines during transfer operations and heel and toe knitting. If machines are being operated at 135 rpm during transfer operations, the speed should be reduced to 100 rpm for better results.

Making patterns is accompanied by constant transferring, and it is only reasonable to expect more transfer troubles with machines set up for patterns than for those on plain and ribbed goods. Excessive speeds simply add fuel to the fire.

Some Causes of Transfer Troubles. Some machines seem to improve with age, or it may be that the experience gained by the fixers accounts for the improvement. If

Cut your knitting cost on

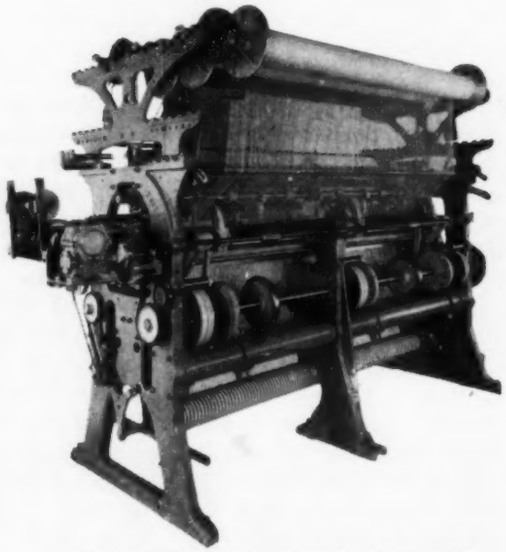
POLO SHIRT FABRIC

The *Kidde* Knitter will produce *more than double* the poundage of polo shirt fabrics, in comparison with prewar Raschel machines. The Chopper Bar on the *Kidde* Knitter operates smoothly, quietly and precisely. With the Chopper, mills are maintaining speeds up to 150 to 170 courses per minute. Without the Chopper Bar, mills are running up to 240 courses and producing 28 to 30 lbs. an hour.

That's typical of the new high production speeds obtained with the *Kidde* Knitter. A new drum drive and needle bar motion make these speeds possible—and the machine is designed throughout to withstand them.

Cut knitting cost on these fabrics too with a *Kidde* Knitter

ELASTIC FABRICS for corsets, girdles and brassieres. DRESS FABRICS. NETTINGS and VEILINGS. DISHCLOTH MATERIAL. LAUNDRY NETS. CURTAIN FABRICS. NARROW FABRICS. SHOE CLOTH. KNITTED OUTERWEAR FABRICS for sweaters as well as for polo shirts.



The word "Kidde" is the trade-mark of Walter Kidde & Company, Inc., and its affiliated companies.

Free literature is available on the Kidde *Knitter. Write for your copy.*

Kidde Knitter

KIDDE MANUFACTURING CO., INC. • BLOOMFIELD, NEW JERSEY

two types of needles are used, it should not be difficult to determine which type gives the best results.

Dividing cam settings should be checked. Five thousandths of an inch clearance between the inner surface of the dividing cam and rib needle panels (with machine on the heel, and rib panels in front of the dividing cam) is sufficient clearance for machines using 5202 needles. Be sure dividing cams are set at the proper height so the camming out action of the sliders will be equal for transferring up or down.

Observe several machines and see if all cams are set the same height from the cover plate to the bottom of the dividing cam. As a rule, dividing cams cannot be set too low. If they are set too low, the upper ends of the sliders in the lower cylinder will rub against the bottom of the dividing cam during heel and toe knitting. Sometimes the cams are set too high, and sometimes they are not set level.

Rough Surfaces. Sliders must be pulled out by the dividing cams a sufficient distance to permit needles to unhook. Excessive pull out simply invites trouble. The caming out surfaces on the dividing cams should be kept free from nicks or rough places. Points where sliders leave the dividing cam and move back into the cylinder slot should be polished. The sliders actually slide over the camming out surfaces at high speeds, and rough places at these points can invite plenty of trouble. Repolishing these surfaces occasionally will help prevent trouble.

39th Knitting Arts Exhibition Atlantic City, April 25-29

The 39th Knitting Arts Exhibition will be held in Atlantic City during the week of April 25-29. Coinciding with the KAE, the Hosiery Industry Conference will be held April 25-26 in Atlantic City, N. J.

Advance information on the Exhibition indicates that it will set an all-time record in size and variety of exhibits.

The Knitting Arts Exhibition is of interest to all phases of the knitting industry—hosiery, underwear, and outerwear.

As in the past, the April issue will carry a special section descriptive of the exhibits which may be seen in Atlantic City.

Be sure that upper and lower cylinders are in perfect alignment and the verge is properly set. Check for lost motion between upper and lower cylinders. Make use of the upper and lower adjusting pinions to reduce lost motion. This adjustment is frequently overlooked. Sinker ring keys on four-inch machines may become worn and key screws often become loose on fine gauge machines.

Excessively loose sinker rings can be the cause of damaged needle latches in plain knitting in the foot or heel and toe. Correct and uniform tension on sliders is important. Too much tension on sliders puts an additional load on lifters and back pickers plus unnecessary friction on all camming surfaces. Do not apply more tension than is necessary to keep the sliders under control.

Tension. Sliders are manufactured with crimp for tension, although it may be necessary to alter the tension depending upon the clearance in the cylinder slots. Sometimes sliders are bent midway between the knitting and transfer butts, and the fixer wondered why he was having trouble. Sliders should not be bent in the shape of a rainbow. Increase or decrease tension if necessary, but bend sliders at the crimp, never above it.

Rough places on transfer cams prevent free movement of sliders during transfer operations. Repolish these cams when gaps begin to develop. Damaged latch guards sometimes cause broken latches which show up during the up transfers. This may seem unusual, but nothing was done except a careful polishing job on the latch guards to overcome the trouble. Apparently some latches were being bent by a rough place on the guards and were damaged further during transfer operations. Frequently a combination of minor disorders can be the direct cause of latches being damaged at the up transfer points.

If the aforementioned adjustments and settings are checked carefully when trapped latches occur, the answer to the difficulty should be found.

Some Causes of Trapped Latches

1. Excessive machine speeds.
2. Improper dividing cam clearance.
3. Dividing cams not set at proper height.
4. Rough or nicked places on cam surfaces.
5. Upper and lower cylinders out of alignment.
6. Loose sinker rings.
7. Uneven tension on sliders.
8. Sliders bent incorrectly.
9. Damaged latch guards.

Preventive Measures for Trapped Latches

1. Reduce machine speed to 100 rpm for transfer.
2. Set cams to five thousandths.
3. Set cams to equalize action of sliders.
4. Polish all cam surfaces.
5. Align cylinders and set verge correctly.
6. Be certain sinker rings are tight.
7. Maintain uniform tension on sliders.
8. Bend sliders at the crimp only.
9. Polish latch guards.

Reader Seeks Additional Information on

EXCLUSIVE

Shrinkproofing Wool Socks

Suggestions for setting up standards with the thiosulfate-iodide test are presented.

EDITOR TEXTILE INDUSTRIES:

The article on Shrinkproofing Wool Socks that appeared on page 229 of the April 1948 issue of TEXTILE INDUSTRIES contained a brief, simple, and satisfactory explanation which we appreciate.

We should like to have more information on the simple way of forming a definite percentage, ratio, or standard from the thiosulfate-iodide test. Our problem concerns the shrink resistance of wool hosiery which is subjected to a five minute period of chlorination. The differences in construction and wools apparently have caused the results to vary.

CONTRIBUTOR No. 8099

Editor's Note: In order to expedite procurement of an answer to the question raised by Contributor No. 8099, his letter was immediately forwarded to H. M. Sandison, the author of the article "Shrinkproofing Wool Socks," which appeared in the April 1948 issue. Mr. Sandison's reply to the question is published here for the benefit of others who may be interested.

EDITOR TEXTILE INDUSTRIES:

In regard to shrinkproofing, several factors make the treatment of wool a difficult problem. In order to answer the question asked by CONTRIBUTOR No. 8099, it is necessary to discuss the treatment of wool in the dyehouse.

It is not difficult to see that numerous complications can arise in processing where all types of wool and all kinds of knitting are subjected to a five minute chlorination process. Unfortunately, few persons in managerial positions have any technical experience, and they are easily influenced by others whose chief asset is an ability to sell a product, or an idea, which may or may not have merit. Too often, eagerness to make a sale outweighs all other considerations, and as a result, the dyehouse is burdened with work, the results obtained are poor, and the relations between dyer and employer become strained, and an unhappy situation exists.

The only way consistent results in shrinkage treatment may be expected is for the mill purchasing department to confine its buying of wool yarns to the same source of supply and have as few grades of wool as possible in the mill at one time. The differences in knitting are more easily controlled than differences in grades of wool. Only when all departments of a mill are fully aware of the problems of the other departments and give them due consideration can the best results be obtained.

To answer the question as to how to set up standards with the thiosulfate-iodide test, local conditions must be considered. The simple way is to take into consideration only relatively the number of ml. of thiosulfate solution needed to clear the iodide acid solution as explained in the article on shrinkproofing.

For instance 4.0 ml. of thiosulfate solution gives a clearing check on a sample of the starting bath when processing a given type of goods when the machine was filled with a capacity load. The subsequent washing tests showed the goods to have the correct treatment. The baths from this machine with the same loading and the same grade of wool would always check around 3.8 ml. to 4.2 ml. thiosulfate on sampling the starting bath. The tests would show that the same amount of chlorine was in bath at the beginning of the treatment. Should the check test show only 2.0 ml. thiosulfate, then the amount of chlorine has been figured incorrectly or the hypochlorite solution is weak.

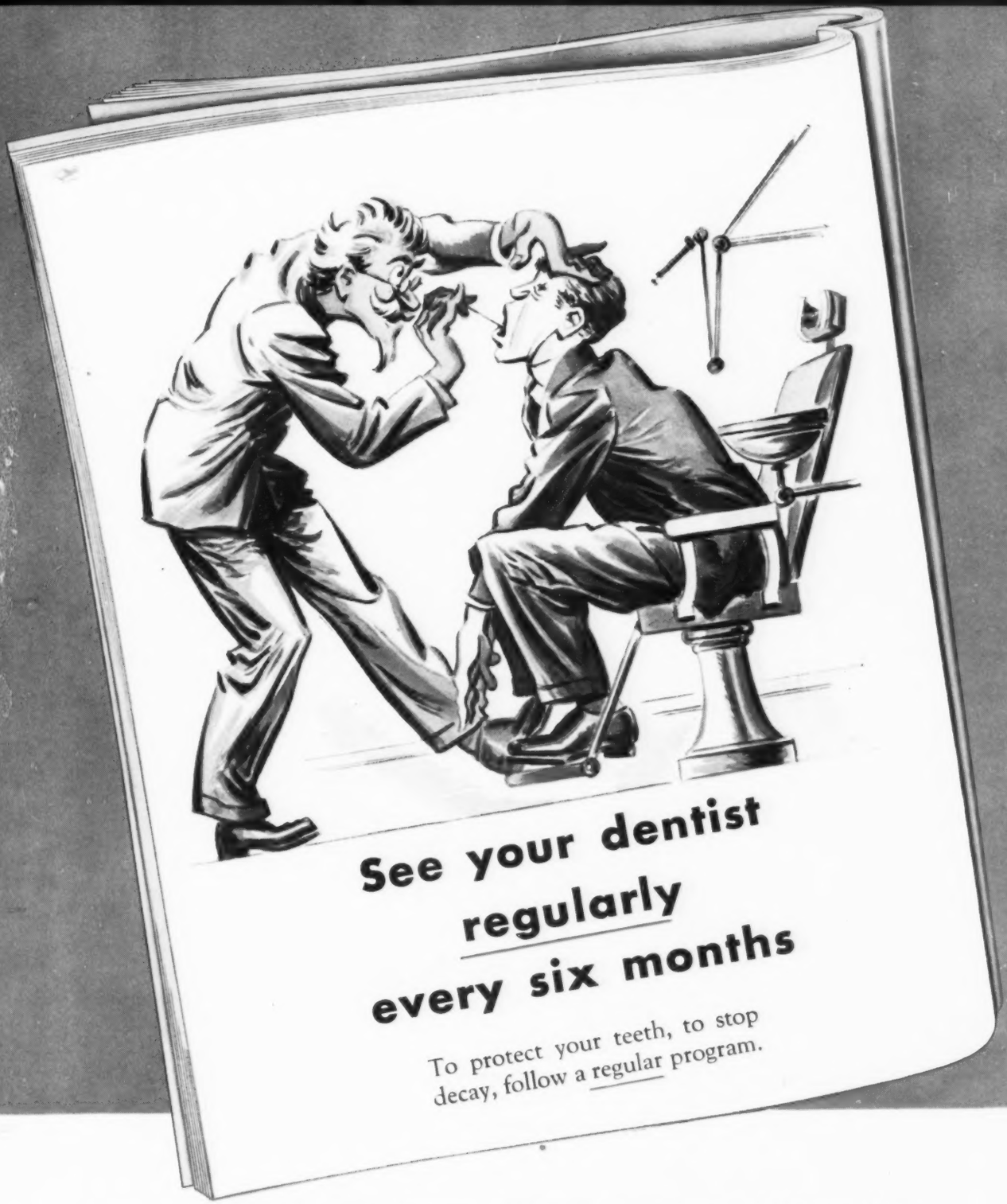
The daily check of the chlorine content of the hypochlorite solution is of utmost importance.

The following method is a quick way to check available chlorine in solution: Take 10 ml. hypochlorite solution, dilute to 100 ml. and mix well. Pipe the 10 ml. of this mixture into a small flask, add 20 ml. water and 10 ml. glacial acetic acid, add an excess of potassium iodide, about 10 ml. of 10% solution, and titrate with N/10 thiosulfate solution until yellow color of liberated iodine is discharged.

1 ml. of thiosulfate=0.003546 grams of chlorine.

Then: If 32 ml. of thiosulfate is needed,

$32 \times .003546 \times 100 = 11.35$ per cent available chlorine.



Have your Full-Fashioned Knitting Machines checked—regularly—to keep them at highest efficiency . . . Follow a regular program for reneedling and your needle bars are always in shape for better knitting . . . Follow a regular program for reconditioning and your plant is always at peak performance. We will be glad to discuss this matter of regularity as it applies to your mill operation.

TEXTILE MACHINE WORKS • READING, PA.

The "READING"
Full-Fashioned Knitting Machine

Hardness where it's important

Textile Spring-Beard Needles are noted for outstanding wear hardness and amazing qualities of resistance. Only Textile's scientific tempering controls could bring about this proper amount of hardness required to withstand resistance from wear and stresses. Added to wear hardness is resiliency required during knitting operations.

The top quality performance of Textile Spring-Beard Needles is the direct result of Textile's rigid quality controls, automatic and electronic, to make certain the needles are correct in every detail. You see the results in better knitting . . . better profits.

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Textile

SPRING-BEARD NEEDLES

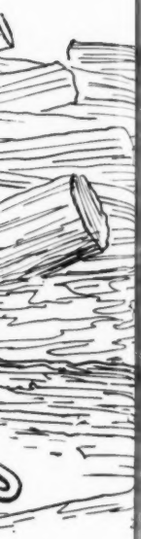
For Full Fashioned and Warp Knitting

A chart is easily computed showing directly the chlorine from the amount of thiosulfate used.

To avoid using large amounts of thiosulfate solution, 5 ml. of the diluted hypochlorite may be used in which case the percentage found is doubled because only .5 ml. of the original solution was used.

With the idea in mind that the figures obtained in titrating the baths in mill runs are relative and that wide variations may appear from machine to machine and from grade to grade of the wool, by observing results of titrations, it is possible to set up a basis of control that will give uniform results on the various grades of wool with the differences in knitting.

H. M. SANDISON



New Opportunities for Knitters

An authority that furnishes the knitting trades with highly valued advice and information recently stated, in effect, that while many manufacturers and distributors have a feeling that 1949 may witness an important letdown in consumer demand and prices, it seems likely that any business change of consequence will remain "just around the corner" for many months to come.

This authority concedes that prices obtainable for finished products will be subjected this year to many ups-and-downs, and "soft spots" may appear more frequently in some lines. But it is stressed that the relationship between spending money and the supply of goods probably will be in better balance than during the past several years.

Interests in the knitting industry look about them, it is added, and they see that the remaining holdings of cash and liquid assets remain huge, when compared with prewar totals. Money turnover has been increasing. This is said to show that inflationary forces are still present in the U. S. economy. The comment is offered: "Neither boom nor slump is inevitable, unless we make the error of relaxing, on the theory that ultimate stability can be had without making an individual and collective effort to achieve it."

It is cited that business problems and government policies need continuous scrutiny in the light of changing conditions, and those in this industry who make only occasional inquiries are adhering to a practice that by now has lost its value. Appraisal of conditions, it is explained, naturally implies that decisions are about to be made, and therefore the more careful the survey, the better such decisions are likely to be for those who make them and those who rely on their suppliers' judgment.

Knitwear producers and distributors also, it is asserted, must have in mind certain objectives which —once adopted—they are bound to follow through to the best of their ability and resources, unless prevented by developments outside of their control.

Wholesale, Retail Underwear Buyers Begin to Price Merchandise

Wholesale and retail buyers of underwear this month are more frequent visitors in the main selling markets, and their numbers have increased. This is the report made by leading producers and selling agents.

The visitors are making a keen inspection of the new lines. Most of them are also keenly interested in prices. Small economies are much sought for by nearly all types of distributors, it is stated. This applies to branded lines of underwear, as well as unbranded.

Wholesale and retail outlets apparently aim to negotiate "better buys" during the current quarter, so as to pave the way for better markups next spring, if demand improves as many retailers now think it will. After all, it is claimed, total disposable income of American wage earners remains close to the record high level. Buying of underwear in the retail stores has lagged behind the potential buying power of retail customers, some observers contend.

Pursuing this theme, it is asserted that since 1940 the real purchasing power of the average retail customer has just about doubled and underwear prices, when contrasted with prewar, have advanced only moderately. Meanwhile, consumers have been furnished better goods as to quality and durability, and the goods have been better styled than ever before.

Where manufacturers of undergarments found synthetic yarns adaptable for new effects, they have offered merchandise embodying the improved features. They also have kept in step with changes in preferred colors, trimmings, packaging, etc., and the garments now are mostly warranted to suit as to size and design.

From the present accounting, some manufacturers are keeping so closely abreast of style trends in underwear and new developments in different sorts of materials and variations in construction, that actually they are able now to forecast buyers' preferences for later this year.

The First of a Series of New Knitting Machines

Designed to Expand Your Hosiery Market

SCOTT & WILLIAMS *Announces*

the New Infants' Komet Links-and-L

The first of the *new* Infants' Komet Links Machines in 2½" and 2¾" diameters, in fine and coarser gauges for knitting infants' half-sox and anklets in sizes from 4 to 6½, will soon be ready for shipment.

For many years infants' hosiery has been produced by machines of limited style and pattern scope. These new machines, however, produce an almost endless variety of Links-and-Links patterns and rib combinations, in both the tops and boots of half-sox and anklets.

With such a varied line of quality infants' hose, alert mills will have the competitive advantage that will win them a larger and more profitable share of this vast market.

Moreover, manufacturers of infants' hosiery are now freed from the difficulty of two machine operation and the staggering expense of hand transfer knitting. **This new machine is completely automatic.** Because of its double feed features, it has an extremely high production rate which means greatly lowered knitting costs.

Call your Scott & Williams representative for samples of hosiery and complete details on the S&W Infants' Komet Links-and-Links Machine.

S&W

SCOTT & WILLIAMS, INC.

Established 1865

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Sales Office: Empire State Building, New York 1, N. Y.

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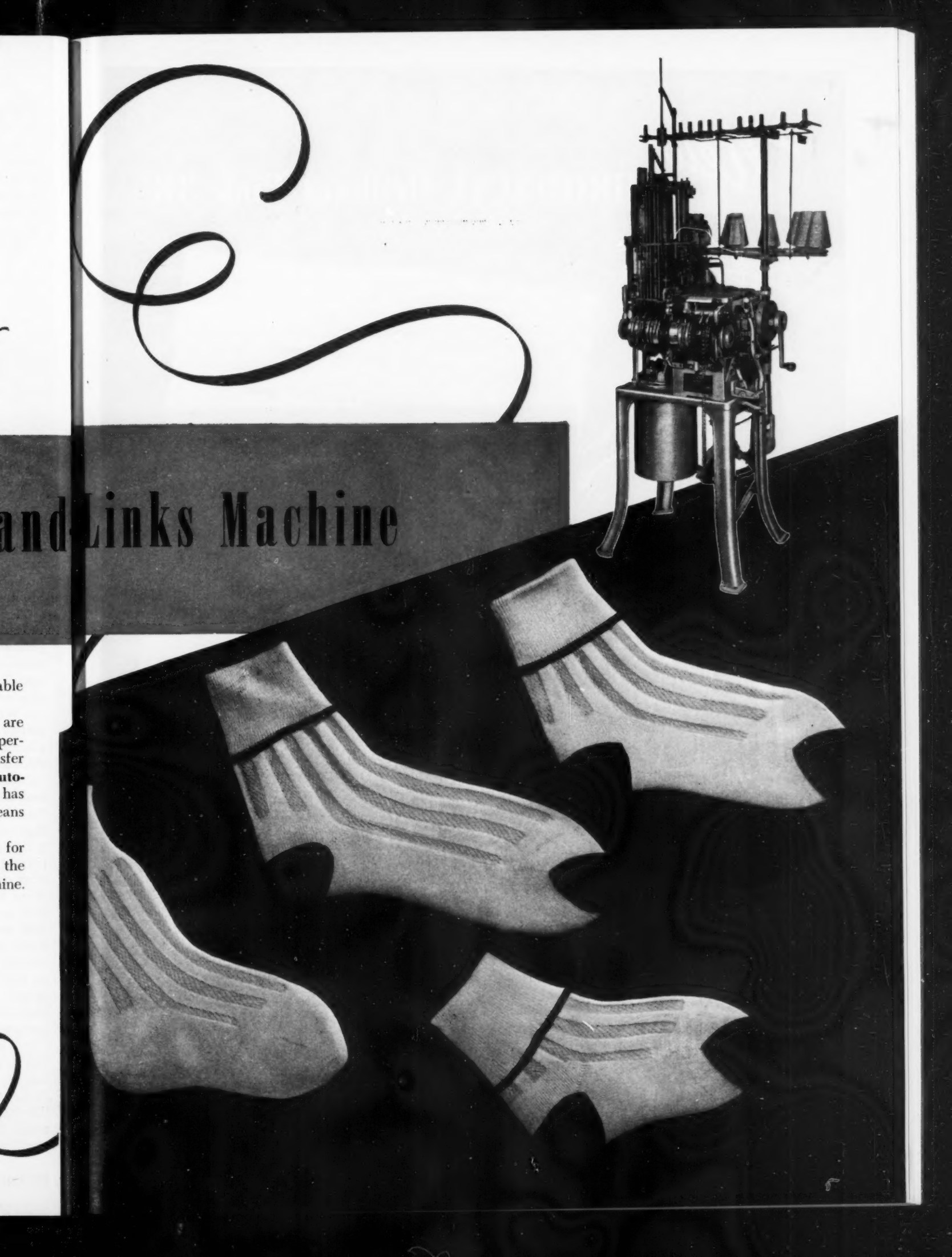

and Links Machine

New CHROMACYL Brilliant Pink 3B

TRADE-MARK

For bright bluish-pink shades . . .
pastels . . . brilliant wines and maroons.

"CHROMACYL" Brilliant Pink 3B has good fastness to light and washing . . . good resistance to dry cleaning, crocking, perspiration, fulling, hot moist pressing and cold water spotting. It has good solubility, thorough, uniform penetration, excellent level dyeing properties. For use on a variety of wools, such as women's suitings, sportswear, bathing suits and carpets.

E. I. du Pont de Nemours & Co. (Inc.),
Dyestuffs Division, Wilmington 98, Delaware

Du Pont Dyestuffs

DUPONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

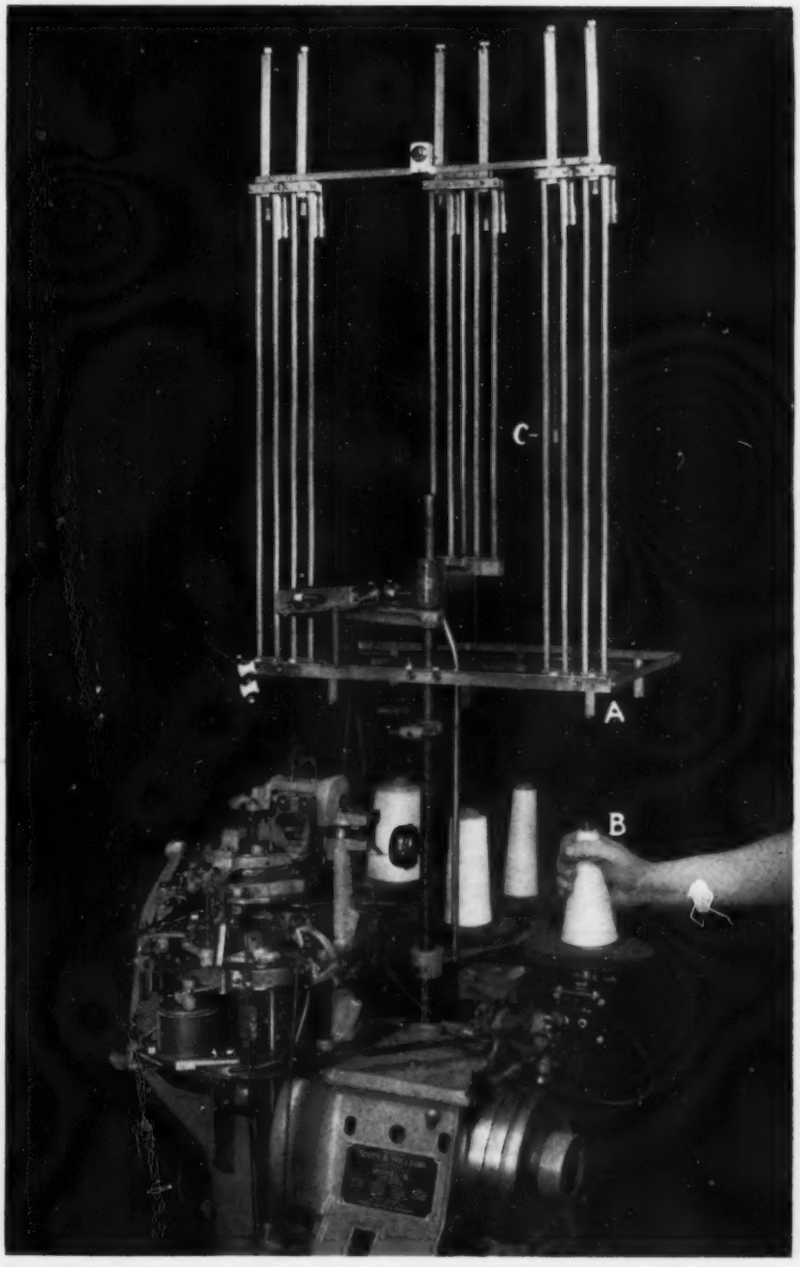
"Certified" Hosiery Gains Support

Over the past several months the unsteadiness of hosiery demand, as reflected in retail sales, has increased the buyers' interest in exploring remedies for this situation. A leading solution is the "Certification of Product" program brought out last year by the Independent Association of Stocking Manufacturers.

It is cited that the majority of producers and distributors agree that something new is needed in the hosiery field which will result in sales of five to ten million dozens pairs more of women's stockings annually. The sponsors of "certification" contend that if their program is strongly pushed by the retail outlets, it is bound to register with consumers, thereby causing an upsurge in sales of nylon hosiery to the benefit of the whole industry.

As reflected at the recent meetings of hosiery groups, it is explained, the overall theme of enlarging hosiery consumption in the domestic markets brought out discussions which seem to show that manufacturers, wholesalers and retailers ought to join hands, or as one observer phrased it: "Let's stick together, or many of us will be 'stuck' separately."

The usual trade opinion expressed recently is that demand for nylon stockings probably has become stabilized at around the current level. Early last year at the annual meeting of the National Association of Hosiery Manufacturers, a speaker representing the re-



NEW ELECTRIC STOP MOTION FOR CIRCULAR MACHINES

A new electric stop motion, designated the WESCO "400," has been placed on the market. Each end of this stop motion is individually adjustable to accommodate different weights of yarns. An electric light on the top center bar signals when the device stops the machine.

The photo above graphically illustrates the unique operating principle of the stop motion. The hand (B) serves to show a sudden impediment to the free flowing of the yarn such as is caused by knots, slubs, under-winding or entanglements. The operating guide (C) slides down the vertical guide bars and stops the machine. The threading of the yarn remains intact. The end detector (A) stops the machine when the yarn breaks at the cone.

The controller is a small compact unit and easily mounted on the machine. No drilling or tapping is required. It may be easily re-set with one finger, according to the announcement.

The transformer may be quickly mounted with one screw. No drilling is necessary. It provides 12 volts output for the operation of the stop motion.

Stop-Motion Devices Corp., 1471-77, Fulton St., Brooklyn 2, N. Y.

For additional data, request item C-121, using business reply card on page 222.

'TOPS' FOR IDENTIFICATION AND PROTECTION

KAUMAGRAPH MARKING

This hat not only identifies its wearer's function. It inspires confidence in the product of his skill. This is the essential associative value Kaumagraph Dry Transfer marking can give your product at point of sale. The recipe is simple, speedy and economical and the results outstandingly evident on any textile, rubber, leather or synthetic material. Build customer confidence in your product and speed its sales now with identification that protects and proclaims its quality. There's a Kaumagraph product for your purpose and a Kaumagraph man at your call.

Do you use stickers? It will pay you to investigate Kaumagraph Embossed Seals. Produced in any color including gold and silver or embossed on metallic paper or foil. Our Art Department will gladly send sketches for approval.

- Dry Transfers
- Prestomark Labels
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- Transfer Irons
- Stamping Inks
- Lithography for Box Wraps
- Labels • Displays
- Booklets and Folders

KAUMAGRAPH

Identification Headquarters Since 1902

KAUMAGRAPH COMPANY, WILMINGTON 99, DELAWARE

EMPIRE STATE BLDG., NEW YORK CITY • *Representatives in Principal Textile Centers of the World*

tail trade pointed out that the majority of hosiery manufacturers were continuing to neglect their outlets, and accordingly the hosiery sections of leading department stores, though still accorded commanding locations and display, had dropped off seriously as to the ratio of dollar-volume they contributed to the average weekly intake from sales of the average store.

Since then, the outcome predicted by this retail authority has been confirmed in the experiences of the merchants and their sources, so that in 1949 the industry is faced with a real contest for greater sales of hosiery.

Factory Payrolls Remain High

In the knitwear field, all the way back to spinners and distributors of yarns and other manufacturing supplies, one of the "reasons" furnished by industry spokesmen to account for comparative dullness has been: "There is a lot of unemployment." Few knitters have lately made goods for stock. Mostly, goods are now made only against firm orders. When and if the retail and wholesale operators find themselves in prompt need of more merchandise to sell, according to this theory, they will be confronted with a shortage.

Experienced observers in this industry frankly state that all the angles of this temporary buying lull have obviously been "overplayed." It is admitted there has been some industrial unemployment and the public for some time has been shopping around for lower prices for everything, but they still seek quality merchandise and this leads the observers to believe that in a great many cases, retailers who are uncertain of their own ability to buy and merchandise may have over-emphasized consumer price-resistance.

It is conceded there has been a moderate let-down of industrial employment in some lines and in certain localities, but the January employment totals for the principal industrial centers show only small changes for January, compared with the weekly average for fourth quarter of 1948, and they show some substantial gains in employment over this time last year.

In the daily newspapers in all the big cities, "help wanted" advertisements still consume within ten or fifteen per cent of the publication space they occupied right along at this time last year. It is admitted that these advertisements partly are for the purpose of raising the general character of mill and factory help, rather than add names to the payrolls. Wage rates and working hours have not been much changed, except that employers now avoid overtime work wherever they can.

AN EYE ON THE KNITTING MILLS

Bernard Knitwear Co., Inc., has been organized with a capital of 300 shares of stock, no par value, to operate a knitting mill in the vicinity of Haverhill, Mass.

Metal Textile Corp., West Orange, N. J., knitted metallic products, has been removed to a building recently secured in Roselle, N. J., which provides double the amount of floor space. The equipment from several former plant units has been consolidated at the new location. Russell B. Kingman is chairman of the board.

High Top Sportswear, Inc., has been chartered with a capital of 200 shares of stock, no par value, to operate a mill in New York, N. Y.

Guilford Mills, Inc., Greensboro, N. C., rayon and nylon tricot knitted goods, is arranging for the early removal of the mill to new quarters in Greensboro, where increased production will be carried out.

J. L. Waynick, president of Waynick Hosiery Mill, Inc., Hendersonville, N. C., and **H. C. Atwater,** Hendersonville, N. C., have plans to establish a knitting mill for the manufacture of women's full-fashioned hosiery at Reidsville, N. C.

Pioneer Full Fashion Hosiery Mills, Inc., recently organized with a capital of $100,000, has plans for the operation of a mill at Salisbury, N. C. Ervin Rader and Frederick Koontz, both of Salisbury, head the mill.

Carolina Mills, Inc., Maiden, N. C., knit underwear, etc., has resumed operations at the No. 2 mill in Dillon, S. C., following a curtailment since last August.

Elmes Fabric, Inc., Brockton, Mass., has been incorporated with a capital of $50,000, to manufacture knit goods. George C. Elmes is president and treasurer.

Julius Kayser & Co., Brooklyn, N. Y., women's full-fashioned hosiery, underwear and other knit goods, is perfecting plans for the construction of a branch mill at Bloemfontein, South Africa, to be operated under the name of Kayser Products (Pty.), Ltd., and will be the first of its kind in that country.

Norwich (N. Y.) Knitting Co., jersey knitted cloth, underwear, etc., has completed construction of a one-story addition to be used for warehouse service.

Texas Knitting Mills is the new name of the McGaugh Hosiery Mills' full fashion plant in Mineral Wells, Tex. This unit was recently purchased by B. D. Gordon, Brookline, Mass.

Knitters to Finish Building Plans

Primary sources in the knitwear field are now well launched on a new phase of expansion, the main features of which were planned long ago. Last year and earlier, these interests purchased and installed a substantial dollar-outlay of new machinery and accessory equipment. This included a wide variety of items that were and are intended to supplement the handling of materials and finished goods. The placing of the machinery orders and contracting for new buildings or extension of old ones were properly coordinated, but as far as the buildings were concerned the program often "bogged down."

The machinery people had nothing to do with the building construction, and accordingly they delivered the new equipment mostly according to schedule. It had to be taken in by the buyers, and in large measure they managed to fit it into cramped quarters temporarily. However, a good many producers of knitwear still feel they need to expand their plants for greater efficiency and to provide for expected further extension of their activities.

Within the limits of existing manufacturing centers, property available for new building has become cramped and high-priced, and delivery problems have become complicated. The urge has been in many instances to move out of congested areas and erect modern buildings, with plenty of parking space and room for additional departments.

Lately the plant construction interests have arrived at a place where they can resolutely go ahead with such work, and projected expenditures accordingly during 1949 will be devoted more to piling up bricks and mortar, steel, stone and concrete, than to ordering additional machinery. The general aim is to locate all features of production under one roof and attain "straight-line" progression of manufacturing operations as far as possible.

In many textile-garment centers, 1949 will witness long-established outfits moving into new locations and occupying modern buildings which have been finished to the last detail and ten years ago would have been dismissed as the "stuff dreams are made of."

Export Outlets Are More Valued

Over the past few weeks, trade discussions and the current trends in this country as well as abroad have emphasized that for a longer lease of prosperity in our textile-apparel field, a larger part of the products of American mills and factories ought to enter into international trade. During the months after the war ended, many of the knitwear and other American manufacturers laid down firm programs for selling our goods to foreign countries. In considerable measure, these schemes failed to produce the expected results. Difficulty of foreign buyers to obtain dollar exchange for payment of their invoices is generally cited as a reason for this.

As competition in this country increases, for domestic sales, trade groups and individual manufacturers in this field have again looked abroad for new markets, but it is said they find many restrictions in the overseas areas against importation of needed goods. For one thing, there is the enigma of foreign exchange, under which the trading value of the currency of the importing country often changes overnight. Also, even when buyers' accounts are paid off, there are other regulations that stand in the way of taking the payments out of the country.

Those who have gone back into the origin of these obstacles point out: (1) The United States is not blameless as to rules and regulations that interfere with foreign trade; (2) during this postwar time, it is the general practice of each government to assume direction of foreign trade from a political standpoint; (3) relief for business men all over the world will come only when government supervision ends, and buyers and sellers can get together again, on a reasonable basis of give and take, such as prevailed always in prewar times.

It is contended by these observers that abroad there is a great and growing demand for American merchandise of all sorts, affording profitable occupation for little as well as big exporters, if only our government will stand aside and permit direct communication between our shippers and those abroad who want our products.

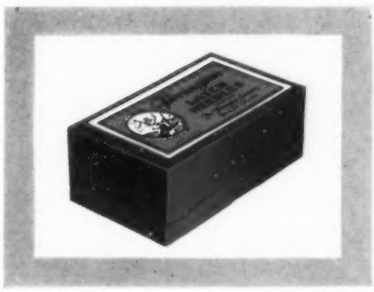
Labor Watches State Laws

Employers report textile-garment unions are among those branches of organized labor which are giving plenty of attention and scrutiny to the programs of state legislatures. One reason is that the United States Supreme Court early this year decided that state laws forbidding the closed shop are constitutional. The statutes already in effect in North Carolina, Nebraska, Arizona and elsewhere are therefore to be regarded more seriously by labor bosses, especially as the Court's decision said, in part: "We have held that the due process clause erects no obstacle to block legislative protection of union members, and we now hold that legislative protection can be afforded to non-union workers."

As interpreted by some of the labor union attorneys, however, the Court's remarks simply implied that, though the unions may not believe the state anti-closed-shop laws are good, the Court is convinced that any legislature has the right to adopt such laws if they are deemed necessary. Forty-five of

What makes a Customer

sure of quality in a knitted product? Fine knitting is one of the most important factors. It tips the scales in countless sales. To produce such knitting, fine needles *must* be used. That's why leading mills throughout the world rely on Torrington Latch Needles—the quality needles made by advanced precision methods. To safeguard your knitting quality, insist on Torringtons in the Red and Green Box.

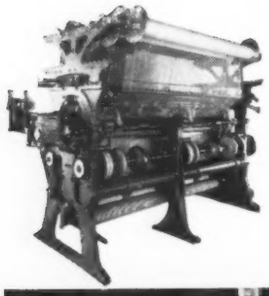


THE TORRINGTON COMPANY

TORRINGTON, CONN., U.S.A. *Established 1866*

Branches: New York • Philadelphia • Chicago
Greensboro, N. C. • Boston • St. Louis • Toronto, Canada
Pacific Coast Representative: E. G. Paules, 1762 West Vernon Ave., Los Angeles 37, California. In England: Broadgate House, 7-10 Eldon Street, London E. C. 2.

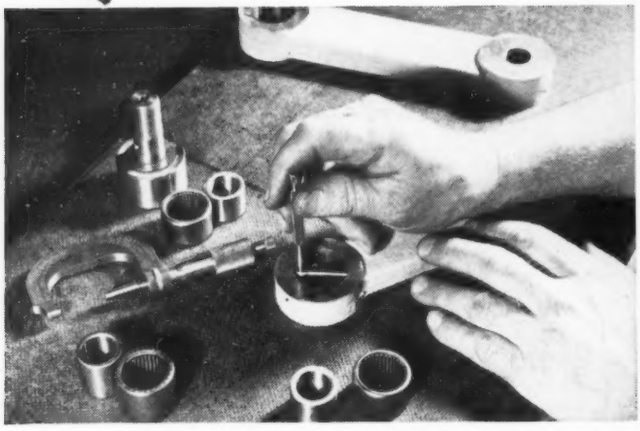
There's a TORRINGTON Needle for every type of Knitting!



Torrington Needle Bearings increase

Precision and Speed

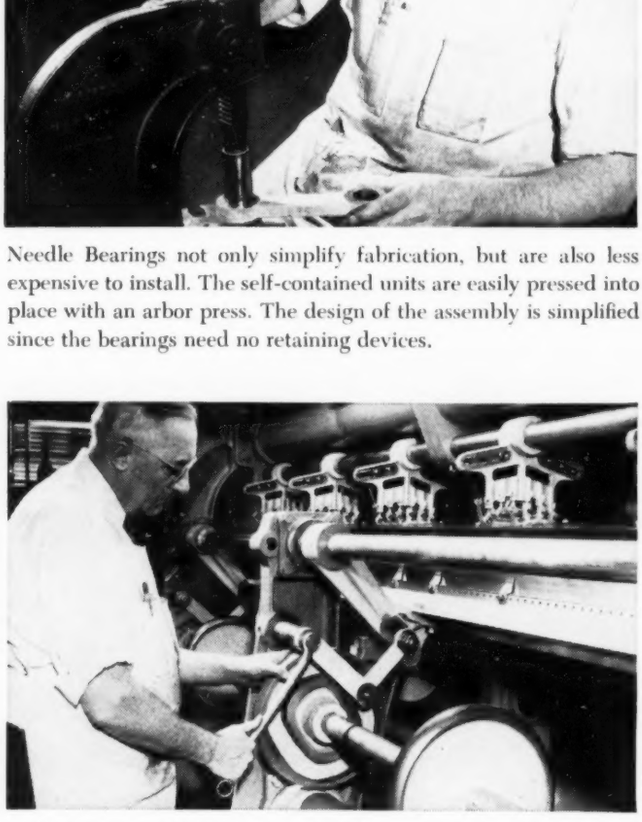
of Kidde Knitters



Precise action of Raschel-Type Warp-Knitting Machines made by Kidde Manufacturing Company begins with a design using 18 Torrington Needle Bearings. In the lifter bar assembly, 4 Needle Bearings assure close tolerances with less machining of related parts.

Needle Bearings not only simplify fabrication, but are also less expensive to install. The self-contained units are easily pressed into place with an arbor press. The design of the assembly is simplified since the bearings need no retaining devices.

Close-up of capacity and precision! Torrington Needle Bearings and Cam Followers handle rotating and oscillating motion very efficiently, thanks to the large area of roller contact surface, precision inner races and effective lubrication.



Lifter bar assembly, being installed above, activates the needle bar for speeds of 100 to 400 courses a minute. In this and the other applications to Kidde Knitters, Needle Bearings reduce friction and help maintain accuracy of knitting action.

In equipment you build or operate, Torrington Needle Bearings can pay their own way . . . in fabricating and assembly savings . . . in high operating efficiency. Our engineers will gladly work with you to adapt them to your requirements. Write us today. THE TORRINGTON COMPANY, Torrington, Conn. or South Bend 21, Ind. District offices and distributors in principal cities.

TORRINGTON *NEEDLE* **BEARINGS**

Needle • Spherical Roller • Tapered Roller Straight Roller • Ball • Needle Rollers

the 48 state bodies are scheduled to meet this year and many of them commenced their sessions during January. Labor leaders point out that state laws, of course, can be just as important to working people as those adopted or proposed in Congress. They concede also that while the chief job of legislative pressure is to make sure Congress restores the Wagner Act in place of the Taft-Hartley Act, extra vigilance is needed in some of the so-called "doubtful" states.

In twelve of the states, it is reminded, laws already are in force, banning all forms of closed shops or union-preference shops, and forbidding the inclusion of the check-off (maintenance of membership provisions) in any labor agreements or contracts entered into in those jurisdictions. Attorneys for employers' associations also have been alerted by the Supreme Court's ruling and it is understood that in some cases where the lawyers believed state action along these lines would be found un-constitutional if tested in the federal or state courts, there has been a reversal of employers' plans, and this probably will result in adding to the number of states where the closed shop has been banned.

Knitters Dominate Yarn Outlook

Knitwear manufacturers, the majority of whom regularly purchase their yarn supplies in the markets, have commenced to reap the benefits from the careful buying and inventory program they inaugurated months ago. During the period that many knitters were disposing of more immediate problems such as clearing top-heavy stocks of finished goods, yarn prices gradually subsided.

The weavers using market yarn were also going through an inventory adjustment. Industrial users of yarn entered the fourth quarter with ample supplies in stock and on order and until recently they stayed out of the yarn markets. Now that knitters, weavers and industrial purchasing agents have resumed their interest in yarns, it can be reported that the underwear people were first to

OUT IN FRONT... MEETING THE EXACTING REQUIREMENTS OF THE THROWING INDUSTRY!

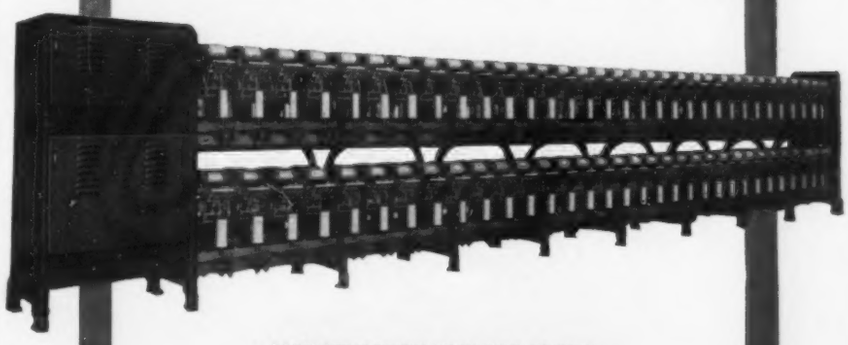
U.S. TM CO

U.S. ACME

FACE DRIVE TWISTER

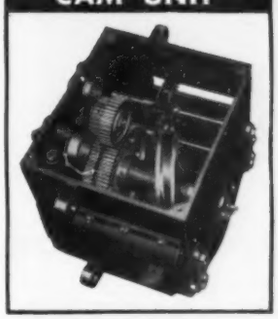
economical! high-speed!

THE HEADLESS PACKAGE TWISTER



ACCURATELY TWISTS YARN INTO TAPERED OR STRAIGHT-END HEADLESS PACKAGES FROM 8-OZ. TO 32-OZ. IN SIZE!

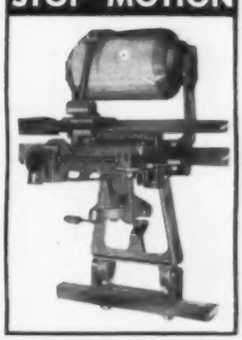
STEADY ACTION CAM UNIT



HIGH-SPEED, QUALITY YARN PRODUCTION AT ROCK-BOTTOM OPERATING COST AND MINIMUM MAINTENANCE EXPENSE!

SMOOTH, STEADY ACTION—Traverse is actuated by a unique cam unit, supplying motion directly and evenly to the traverse bars to eliminate loss motion! Built-in secondary motion prevents built-up ends of yarn on packages!

STURDY, FOOLPROOF STOP MOTION



YARN ECONOMY & PROTECTION—

Mechanically positive stop motion individually stops each package in event of yarn breaks! Adjustments are unnecessary after installation!

128 TO 200 INDIVIDUALLY CONTROLLED SPINDLES— (Marquette roller bearing spindles available with each machine)

NEW AND IMPROVED SPINDLE SWING UNIT with floating brake and finger-tip release.

PIVOTING TAKE-UP YOKE is preloaded with a spring to assure even movement in the forward position!

MODERN THROWING EQUIPMENT FOR PROFITABLE PRODUCTION

• Cuts Operating Costs • Boosts Production & Quality • Reduces Maintenance

WRITE FOR ILLUSTRATED BULLETIN!

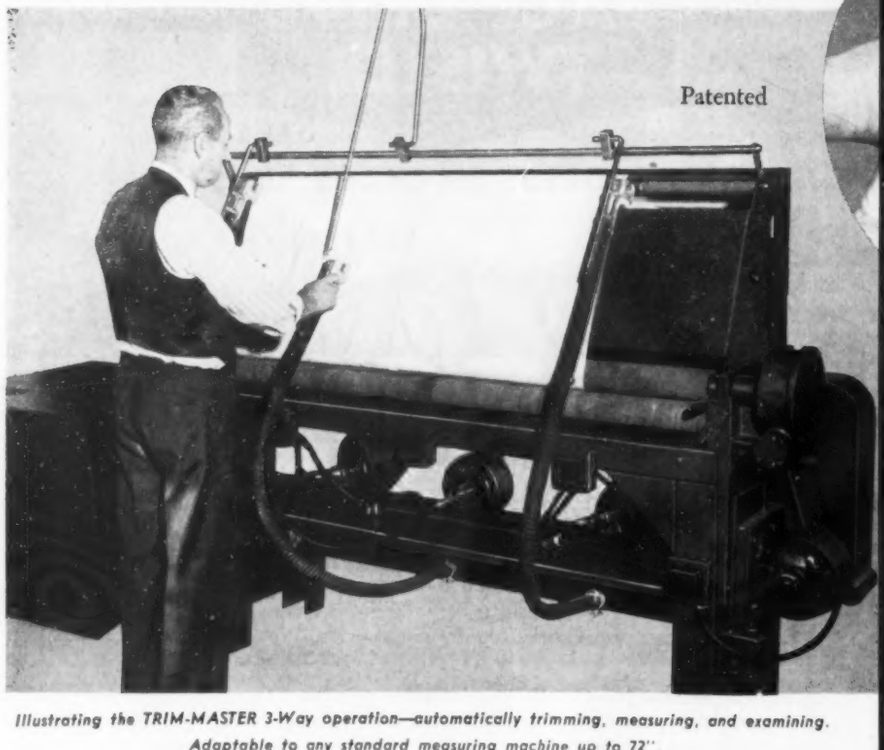
U.S. TEXTILE MACHINE CO.

700 Gilligan St.—Scranton 8, Pa., U.S.A.

the Revolutionary

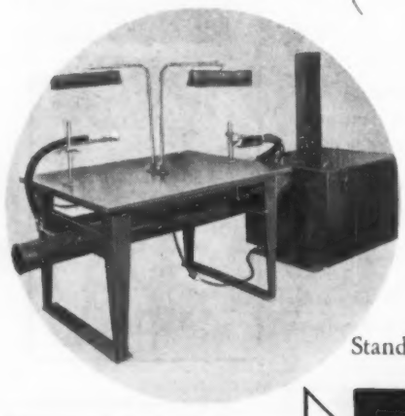
AUTOMATIC THREAD TRIMMER

Finds, Clips, and Removes Threads While Goods are Being Examined and Measured



Illustrating the TRIM-MASTER 3-Way operation—automatically trimming, measuring, and examining. Adaptable to any standard measuring machine up to 72".

TRIM MASTER



The Suction Thread Trimmer Specially Adapted for the Textile Industry

Standard TRIM-MASTER set-up for sewn garments

Four TRIM-MASTER Features

1. Reduces Rejects

Fixed Trimmer Engines on selvage ends automatically find, clip, and remove loose end threads as goods wind or rewind. Flexible center Trimmer Engine cleans imperfections on fabric face.

2. Speeds Production

TRIM-MASTER's three way function automatically trims as it examines and measures, combining three time-consuming operations into one.

3. Improves Quality

Electrically operated concealed blades in Trimmer Engine assure snag and slash-proof operation... cannot damage material or miss loose end or clinging threads.

4. Keeps Department Clean

Suction draws thread from Trimmer Engine through duct, and deposits it in Removable Waste Container.

Write for descriptive folder T.I. and of representative nearest you.

GINSBERG MACHINE CO., INC. 224 Fifth Ave., N. Y. 1

Sole International Distributors for TEXTILE TRIMMING AND BOARDING MACHINE CO., Reading, Pa.

cover resolutely ahead with natural and synthetic materials, and it is understood they obtained attractive prices.

Spinners of cotton yarn some months back took steps to curtail production of kinds and counts not then asked for. However, their overall output of sale cotton yarn still remains at a relatively high level.

From the consumers' angle, the continued liberal rate of yarn production seems to insure prompt deliveries on new orders, while competition for business is stiff enough to warrant spinners in sustaining their quality standards. Over the last couple of months, yarn supplies have been greater than the immediate demand and price concessions have continued in some cases even beyond the point where yarn sources claimed they had already reached their "break even" level.

Buying of woolen and worsted yarns has been below spinners' expectations, so far, but raw wool and tops have remained relatively high because of speculative operations in wool, in the original markets, by interests that seek profits from dislocated exchange rates in international trade. For the hosiery and underwear trades, synthetic yarns are in better supply now, and their prices keep competition alive among the sellers of yarns spun from natural fibers.

Tissue for Hosiery Packaging

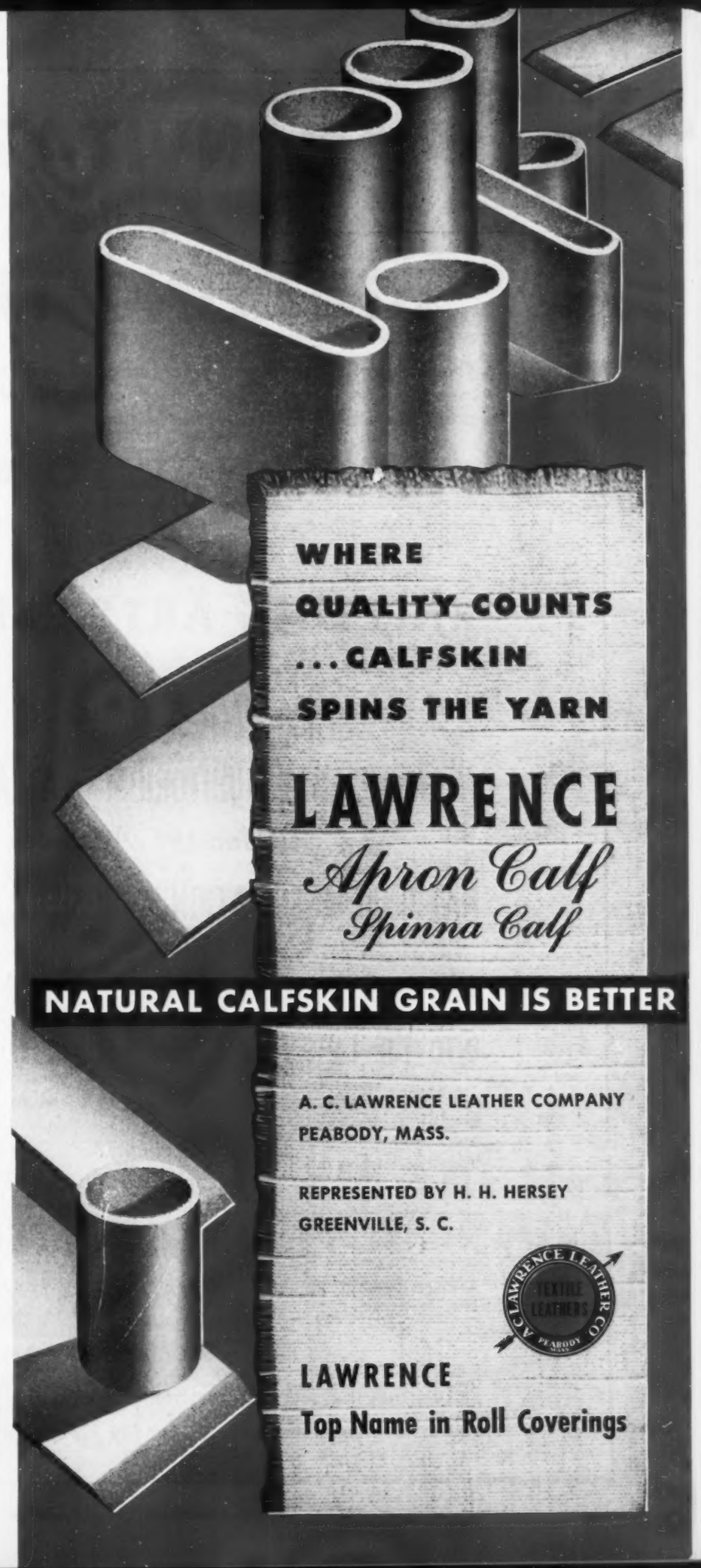
A tissue for textiles and hosiery, known as Satin-Finish Tissue, has been introduced. This new tissue is available in all colors except gold.

The coated surface has finish that can be imprinted with sales messages or trade names in any color, with the exception of gold.

It is especially useful to the hosiery industry since its softness and appearance provide a very attractive package at economical cost while fully protecting the sheer hosiery.

E. W. Twitchell, Inc., Public Ledger Building, Philadelphia 6, Pa.

For additional data, request item C-151, using business reply card on page 222.



AN INVITATION

to the

KNITTING TRADE

The industry's leading manufacturers of knitting, dyeing and drying machinery, mill supplies and allied products, exhibiting their machines, processes and new mechanical features

INVITE YOU TO ATTEND

The 39th

KNITTING ARTS EXHIBITION

April 25 thru 29, 1949

ATLANTIC CITY AUDITORIUM ATLANTIC CITY, N. J.

Under the Auspices of

NATIONAL ASSOCIATION OF HOSIERY MANUFACTURERS

THE ATLANTIC CITY AUDITORIUM WILL BE TRANSFORMED INTO THE LARGEST KNITTING MILL EVER PUT IN OPERATION

Mill officials, company executives, purchasing agents, sales managers and key men in all branches and departments of the trade should plan to attend and become familiar with the latest and improved methods shown by over three hundred of the industry's leading manufacturers.

PLAN TO ATTEND!

ATLANTIC CITY PROVIDES EXCELLENT HOTEL ACCOMMODATIONS . . . . AT A WIDE RANGE OF RATES . . . . ATTRACTIONS FOR RELAXATION AND ENTERTAINMENT

Tickets may be secured free from exhibitors or from the management

Albert C. Rau, Manager 929 Park Square Bldg., Boston, Mass.

The Tri-Truck (Melooz).

Three-Wheel Hand Truck Cuts Handling Costs

A new three-wheel hand truck, designated the Tri-Truck, is a ruggedly built hard wood and steel general duty hand truck, incorporating a telescoping support which adjusts and locks instantly to the correct balance position for any type and weight of load, even with the load on the truck.

The truck itself balances and supports the load, so that inexperienced, older, or lighter men can do safe, efficient hand trucking work. It provides leverage which more than doubles the trucker's strength for easy loading, gives safe, sure control for unloading, and makes wheeling the load almost completely effortless, according to the manufacturer.

The truck keeps the load balanced, even on rough, wet, or slippery surfaces, or if it strikes a floor obstruction, or if a collision occurs with another truck. Once the truck is loaded, it is set for use as an easel on the weighing platform, for movement in elevators, without the need for further loading and unloading. Thus time-consuming rehandling of merchandise, and lost motion are dispensed with.

Melooz Manufacturing Co., 4730 Avalon Blvd., Los Angeles 11, Calif.

For additional data, request item C-103, using business reply card on page 222.

Humidifier for Medium Areas

A "Junior Walton" size humidifier is now in production.

This humidifier is designed to fulfill the need for a humidifier to take care of medium sized areas. The unit is designed to service the medium sized areas too large for the small units, except in multiples, and too

Only FIDELITY *offers this* FIRST RADICAL IMPROVEMENT IN SKEIN REELING *in 40 Years!*

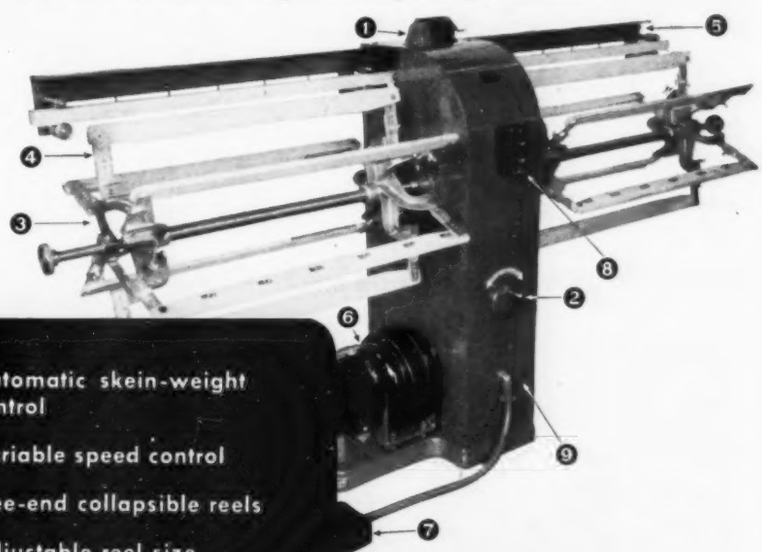
AN entirely new concept in skein reeling machine design has increased operator efficiency from 25% to 100%, depending on yarn processing methods!

This new Fidelity Reeler makes it possible for one operator to service up to four machines . . . doffing and starting new ends on one, *while three machines continue reeling*. Simplified charts are available for determining the number of machines one operator can tend, based on such factors as yarn count, skein weight, etc. These charts are invaluable in setting up production lines.

Automatically controlled, the Fidelity Skein Reeler shuts off when the exact skein length is reached . . . no guessing, no watching. Result: greater efficiency and ease of operation, less fatigue, smooth, increased production. Specially designed adjustable reels and variable speed control provide quick adaptability to production changes for any type or size dye lot.

Available, double end: twelve skeins—single end: six or nine skeins —all Fidelity Skein Reelers embody the important refinements listed below . . . all offer savings to meet competition.

For details, fill in the coupon and clip it to your letterhead.



1. Automatic skein-weight control
2. Variable speed control
3. Free-end collapsible reels
4. Adjustable reel size
5. Adjustable yarn traverse
6. Automatic motor brake
7. Pedal brake release
8. Pust button start-stop switch
9. Enclosed drive, safe, compact

FIDELITY MACHINE COMPANY
INC.
3908 Frankford Ave., Philadelphia 24, Pa.

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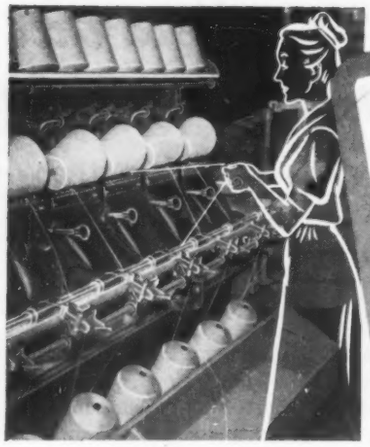

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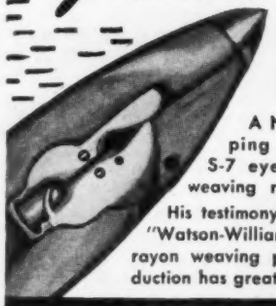

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The humidifier requires no steam, no pumps, no compressors, and no return lines. It is noiseless in operation, and the vapor is emitted like a fog.

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The Abbeon Supply Company, 58-10 41st Drive, Woodside, New York, N. Y.

For additional data, request item C-152, using business reply card on page 222.

New Rigid Coupling

A "Taper-Lock" rigid coupling for rigidly connecting the ends of two shafts has been announced. According to the manufacturer, the coupling will take the place of the old type flange couplings in sizes up to and including 2 15/16"; it will also be furnished in sizes up to and including 5". The ribbed and compression couplings formerly furnished will also be replaced.

The coupling permits easy coupling or disengagement of shafts and the equivalent of a shrunken-on fit is obtained simply by tightening two set screws. This coupling has a male and female joint and is machined all over.

Dodge Manufacturing Corp., Mishawaka, Ind.

For additional data, request item C-113, using business reply card on page 222.

Electric Immersion Heater for Hot Water Boilers

A thermostatically controlled electric immersion heater which can be connected to any hot water tank or boiler to provide electrically generated heat, has been developed.

The heater is fitted with a bushing with a one inch tapered pipe thread, which will fit standard domestic hot water boilers—or a 1¼" thread if desired—and a pilot light.

Installation is simple. The heater is inserted in the boiler and then connected to any convenient electric receptacle. The thermostat maintains the heat at any desired temperature, is adjustable, and prevents danger of overheating.

Vulcan Electric Co., Danvers, Mass.

For additional data, request item C-114, using business reply card on page 222.

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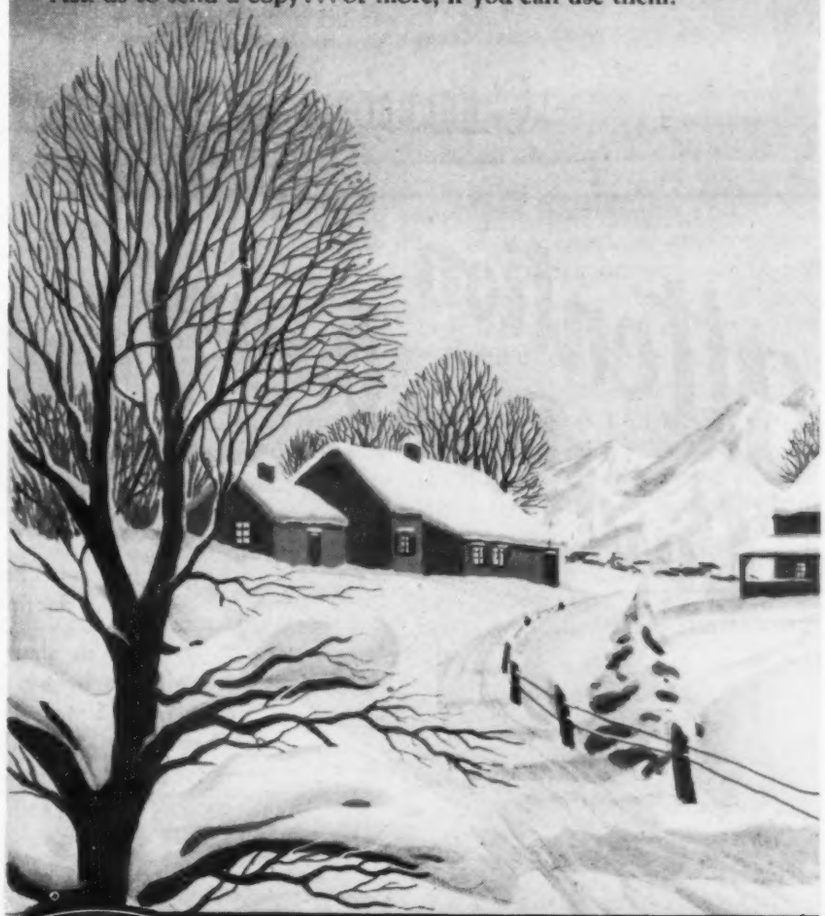
The characteristics and applications of Onyxsan Cationic Softeners are covered in full in Onyx Technical Bulletin TX-1.

Ask us to send a copy . . . or more, if you can use them!



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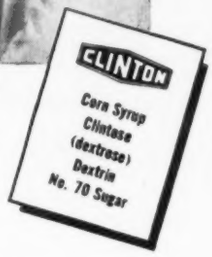

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Humidity in Long Draft Spinning

Question Briefed: *In the past, 60 to 65 per cent relative humidity was standard for conventional spinning with short draft equipment. With the introduction of long draft equipment, most mills find that they can run with as little as 55 per cent relative humidity, and in some instances even less than that amount.*

If we could ascertain the reason why the relative humidity must be reduced for long draft equipment, it may be possible to do something about it, thereby increasing the amount of relative humidity in the spinning department with the consequent result that we would get the benefit of increased cooling from the higher per cent of moisture. We should appreciate any helpful suggestions from your readers regarding this matter. (CONTRIBUTOR No. 8121, *December* 1948).

EDITOR TEXTILE INDUSTRIES:

We have read with interest the inquiry of CONTRIBUTOR No. 8121 in the December 1948 issue of TEXTILE INDUSTRIES regarding the problem of cooling and humidity in long draft spinning and note that he is contemplating the installation of some evaporative cooling equipment in his spinning department.

Our spinning room has 24,192 spindles of Whitin long draft, 2½" to 3¼" rings, and we spin yarns from 6s to 12.50s from .85 hank roving. We have had an evaporative cooling and humidifying system in this department for several years. Our drafts range from about 7.06 to 14.71.

I have read a lot of discussion on the question of the relative humidity which can be used in long draft spinning. Some concrete figures taken from our laboratory reports are as follows:

Month	Average Relative Humidity in Spinning Room
November 1948	62.0%
October 1948	60.8
September 1948	61.7
August 1948	63.2
July 1948	66.0
June 1948	62.4
May 1948	61.7
April 1948	61.6
March 1948	60.9
February 1948	61.9
January 1948	61.6
December 1947	62.6
Average for 12 months	62.2%

The foregoing figures were obtained by taking averages of the daily readings of the six recorders in the spinning room. The readings were recorded by a technician from the laboratory at about the same time each day.

During this same period our yarn numbers ranged from 6s to 12.50s and averaged 8.27s. The ends down per 1000 spindle hours averaged 35.6. The ends down are checked on a regular schedule, one spinner being checked each day for four hours, alternating morning and afternoon.

From the foregoing information it can be seen that our spinning does not run too badly, although the relative humidity averages above the 60% which some spinners say cannot be maintained with long draft.

Too much twist in the roving may be the cause of bad running spinning rather than the high humidity. A number of years ago we started using the Belger roving tester on a regular schedule. Our roving was so hard that the pen ran all the way to the top of the chart. In fact there was not enough room on the chart to tell anything about the quality of the roving. The spinning was not running well either.

I thought that perhaps our roving tester was not operating properly, so it was returned to the factory for overhauling and calibration. When the instrument came back, the pen line was still at the top of the chart, so the overseer of the card room kept taking out twist until the pen line came down near the middle of the chart where it is running now.

Of course the speeders began to run badly and had to be put in good condition. The jack shafts had to be slowed down some because the larger twist gears speeded up

$100 for Best Kink or Short Cut

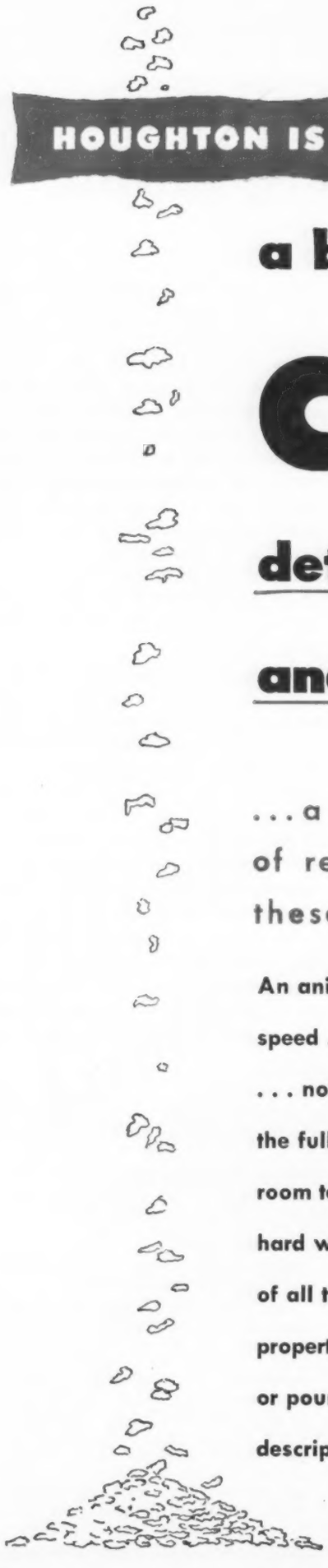
(Ends March 15, 1949)

ONE HUNDRED dollars will be awarded the contributor who furnishes the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea by March 15. The contest may be entered by any reader of this magazine, but the kink must not have been published elsewhere.

In sending in ideas, give complete description and where possible accompany description by sketch. Finished drawings are unnecessary. Participants are not restricted as to number of kinks submitted for consideration.

Only one award will be made, but non-winning contributions will be paid for at regular rates if used. Advise in original correspondence if participant's name may be used, or if contributor number is preferred.

All entries must be postmarked not later than midnight of March 15, 1949. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.



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the front rolls to the extent that the tender could not operate the frames properly.

It is a well known fact that the less twist there is in the roving, the easier it will draft on the spinning frame. The optimum twist to be inserted in the roving in any particular plant depends upon local conditions. There should be enough twist to permit the roving to run on the speeders and to unwind in the spinning creels without breaking back.

Because of the natural tendency of the cotton fibers to resist separation and pulling apart when twisted and the fact that the higher humidity increases this tendency to make the drafting harder, it can be seen that a reduction in the twist in the roving would make the drafting easier, even with a higher moisture content.

CONTRIBUTOR No. 8147

Start Picker Laps Easily With Unique Device

This item submitted in a "kink" contest.

EDITOR TEXTILE INDUSTRIES:

A wrinkled, unevenly started lap on the picker lap pin will run out badly on the card. Therefore, it is important to start it smoothly. The custom followed by many operatives is to pull the pin leaving the lap rod in the lap, then remove the lap and prepare to weigh it. The pin is then placed on top of the lap end and the new lap is started around it. In order to make the cotton stick to the pin operators often "spit" on the pin to get it to stick and start rolling around the pin. Of course this is a very unsanitary and sometimes dangerous practice, not to mention the lumpy, uneven start.

As shown in the accompanying sketch, we have devised a more satisfactory method of starting the lap. First we obtained a piece of 3" galvanized pipe and cut off a length which corresponded to the length of the pin surface, or the lap width. We split the pipe from end to end, thereby making troughs for two finishers. (If there is only one finisher just use one of the halves).

Next, we attached this to the front of the machine to hold the lap pin. This may be done in any way which is most convenient for the make of picker. Then we cut a piece of woolen clearer cloth to fit the inside surface of the trough. We bored small holes to accommodate some rivets and lined the trough by riveting the clearer cloth along the two top edges as shown in the sketch.

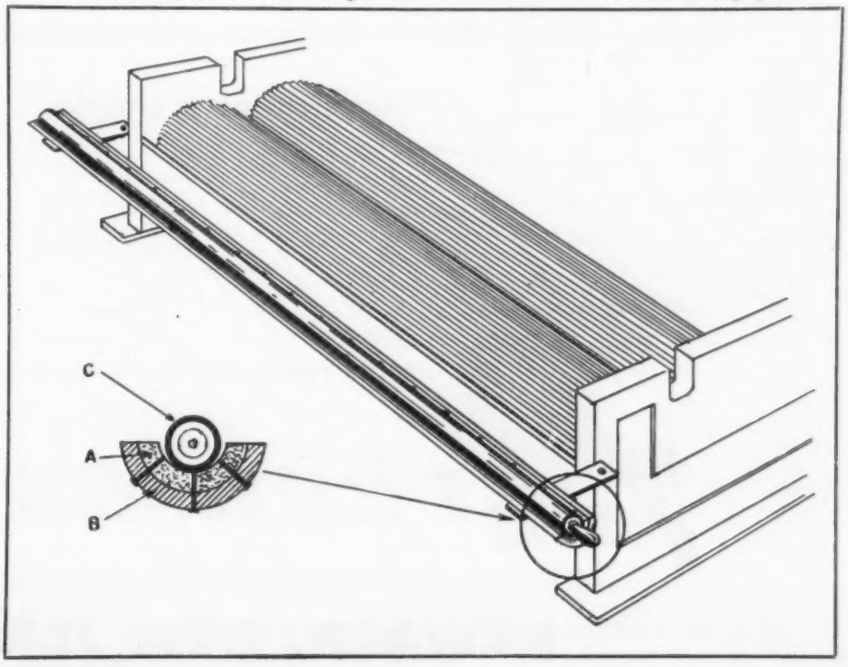
The clearer cloth is then saturated with the same type of mineral oil we use to spray on our cotton. The cloth acts as a wick and carries enough oil to moisten the lap pin when it is placed in the trough prior to the doffing operation. When the pin is laid across the end of the lap for the start-up of the new lap, the fibers cling to the pin assuring a smooth sheet around the pin every time. Needless to explain, this runs out nicely on the card, doing away with lumps, wrinkles, uneven places, and waste.

The oil is readily available if you spray your cotton. If you don't spray, you can get a small quantity and keep it on hand for starting your laps. The oil has no objectionable characteristics and really does the cotton and machinery good.

The writer believes it will be a worthwhile addition to any picker.

CONTRIBUTOR No. 8126

This illustration shows the application of the trough to the front of finisher picker. The cross section of the trough shows how the rivets hold the felt lining. The split pipe used for the trough is indicated by (B). The lining is shown at (A), and (C) is the lap pin.



Re-Corking Loom Clutch Plates

EDITOR TEXTILE INDUSTRIES:

When re-corking an X-model loom clutch plate it is sometimes difficult to obtain a good bond between the cork disk and the metal plate. A press can be made of two

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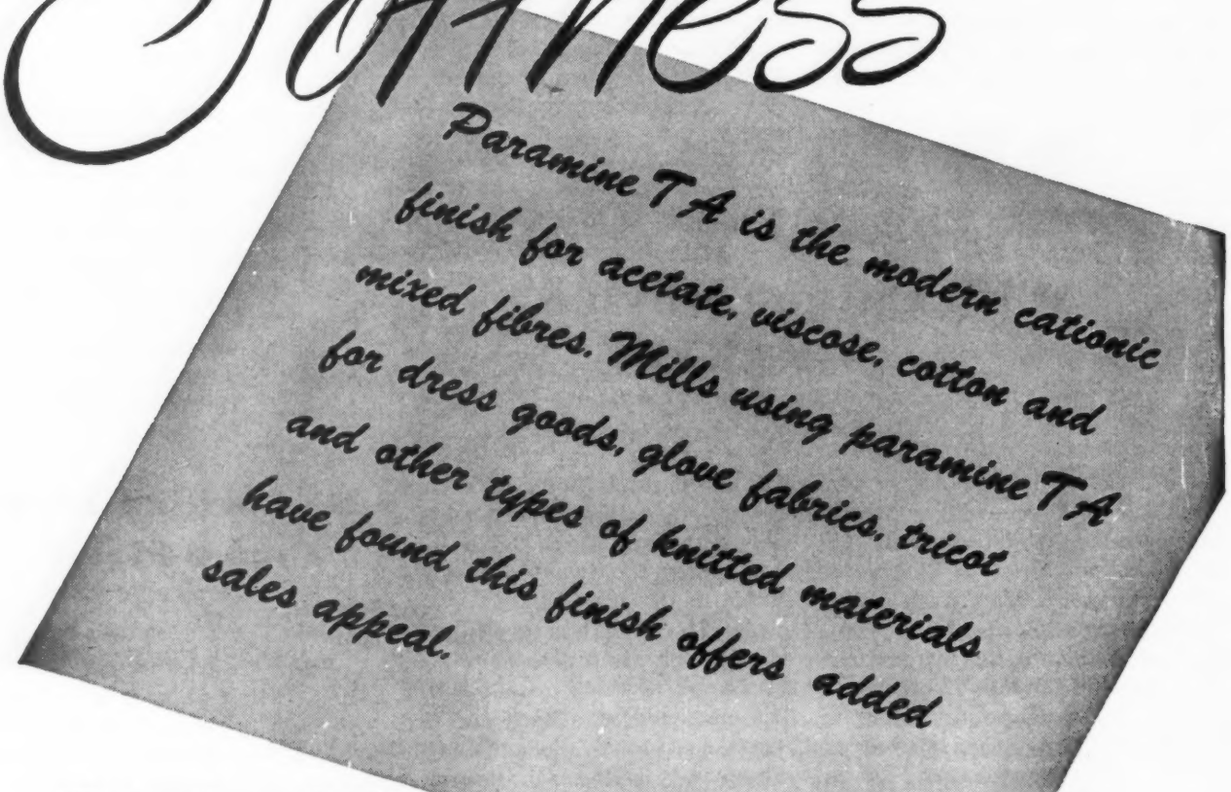
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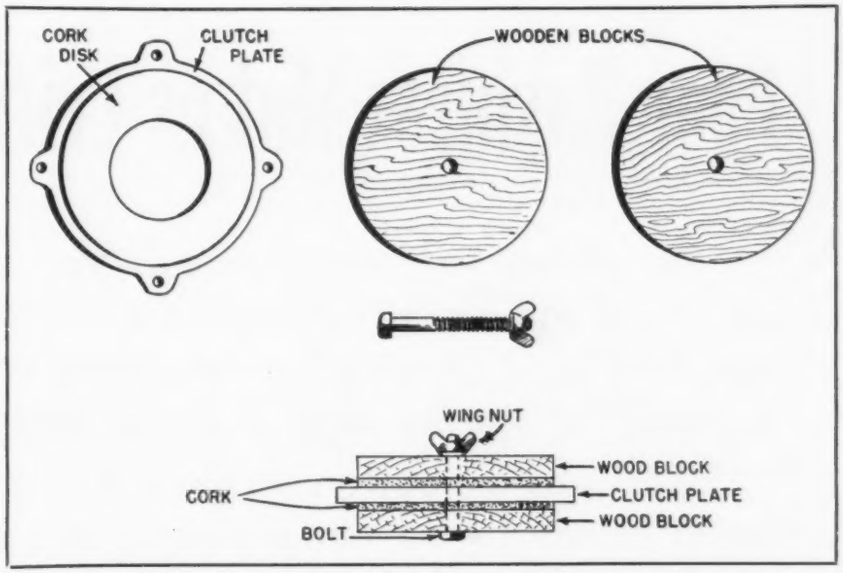
blocks of wood sawed in circular form the same size as the cork disk (about 10" dia.).

A hole is drilled through the center of both blocks and the blocks, cork disks, and clutch plate are placed together, like a sandwich, after a thin coating of liquid glue has been applied to the plate and disks.

A long bolt is passed through the holes in the blocks and secured with a wing nut. The nut should be tightened just enough to hold the cork and plate firmly together, and the assembly should be placed in a warm dry place for at least 12 hours before the blocks are removed. The blocks should be made of well-seasoned wood about one inch thick.

The accompanying sketch shows the component parts.

CONTRIBUTOR No. 8130



Some details of a simple press for use in re-corking X-model loom clutch plates are shown in this illustration.

Quilling Operation Improves with New Procedure

EDITOR TEXTILE INDUSTRIES:

The management of a New Jersey mill complained about low production in their quilling department.

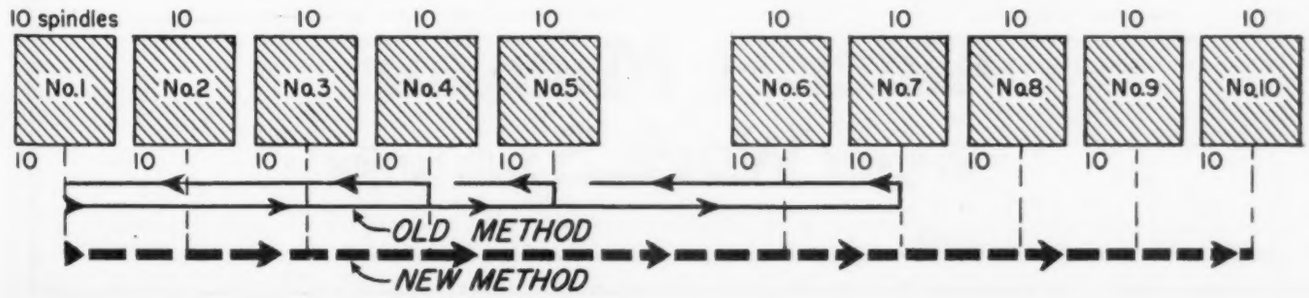
After making a careful study of the procedure in that department, I found that the operatives had too many idle spindles. The number of spindles per operator was not excessive, but there was no systematic sequence of operations, and the spindles were not segregated according to size and time required to fill them.

Each operative had small, medium, and large quills on the same machine and was expected to run five machines. Three ends were wound on six-inch quills, two on seven-inch quills, and four or five on eight-inch quills. The smallest quills filled in five minutes, the medium quills in eight minutes, and the largest quills filled in twelve or thirteen minutes.

An operative tending the first three or four machines had to return to the first machine to doff full quills and replace them instead of continuing to the end of the row of machines without interruption. Soon the quills of the untended machines became full and stood idle. Each operative had an average of 20 to 25 idle spindles all the time, and that explained the low production in this department.

I suggested that only one kind of quill be run on each machine. Thereafter, operatives whose

Before the new method for operating quillers was put into effect, an operative had to make several return trips to the first group of machines to doff full quills before continuing to the end of the line. The small arrows indicate that the operative returned to machine No. 1 after having reached machine No. 4. A return trip was made from machine No. 5 and machine No. 7 because quills on the first three machines were filled and ready to be doffed. When the new method was installed, only one kind of quill was run on each quiller. The path of the operative is indicated by the large arrows. Return trips were eliminated, and the operative continued to the end of the line before returning to quiller No. 1.



Poor Business Makes Critical Buyers

As prices fall, the demands for improved quality rise. Yarn and cloth that buyers accepted happily a year ago, and were praying for two years ago, are now being rejected for specks, neps and unevenness.

As far as the cotton textile industry is concerned, the boom seems to be completely over, and every cotton mill has got to dig in to meet competition.

Any cotton mill that does not have a thoroughly modern opening and cleaning system is operating under a terrible handicap, and machine-picked cotton is just over the horizon.

If you do not have a thoroughly modern and highly efficient opening and cleaning system, let us plan one for you.

We make a complete line of opening and picking machinery, and are prepared to take care of your needs in both picker room and opening room.

FOR PICKER REPAIR PARTS, TELEPHONE US IN GREENWOOD, AND YOU CAN HAVE THE PARTS AT THE MILL THE NEXT DAY OR THE DAY FOLLOWING.

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quills filled in five minutes were given less spindles to tend than those whose quills required 12 to 13 minutes to fill. The operatives were instructed to doff each quill in its proper sequence from left to right without interrupting the cycle.

The result of the change was better than had been anticipated. Production increased 24 per cent, and operatives were happier on their job and did not become fatigued as they did before the change was made. The foreman was relieved of a production problem, and management admitted that better conditions and increased production in this department on a three-shift basis showed a substantial yearly saving. The accompanying illustration shows a schematic comparison of the old and new method.

CONTRIBUTOR No. 8151

Varnish on Leather Covered Rolls

Question Briefed: *Does anyone varnish the leather covered spinning top rolls? If so, will a mill friend kindly give his observations and recount advantages or disadvantages for varnishing ring spinning leather top rolls.*

One advantage we assume would be that the leather roll may run in either direction regardless of piecing-in arrow direction. Are leather covered top rolls not usually varnished on account of costs? (CONTRIBUTOR No. 8101, *October,* 1948).

EDITOR TEXTILE INDUSTRIES:

CONTRIBUTOR No. 8101 asks if it is common practice or is it practical to varnish spinning leather rolls? I for one would say it is not practical. However, in some mills it is practical.

The reason varnish is used on card room rolls is to ward off lap-ups, or protect the leather from oil. It is much easier to wipe off varnished rolls. Should oil get on leather it will penetrate into the leather, ruin the roll, and be a source of lap-ups.

The same also applies to the spinning rolls. It is far less expensive to varnish rolls in the carding department because one spindle in the card room will run many spindles in the spinning department.

Ordinarily in spinning, one top roll takes care of two ends, and in a 20,000 spindle mill the front top rolls would amount to 10,000. It would be expensive to refinish these rolls because the varnish would last only two or three weeks. After that time it would be worn off, and the roll would have to be roughened again for varnish to adhere.

One advantage would be less lap-ups on the top rolls. Another would be less eyebrows. The roll must be removed from the varnishing board in a rolling motion to keep excess varnish from being left on the roll.

Unless it is picked up properly there would be a ridge left on the roll and when dried it would bump, or bounce, as it revolved in contact with the bottom steel roll.

Upon starting up on Monday morning, if rolls were varnished on a damp week-end, the stock would go around the top roll. I have seen this happen in the card room.

CONTRIBUTOR No. 8139

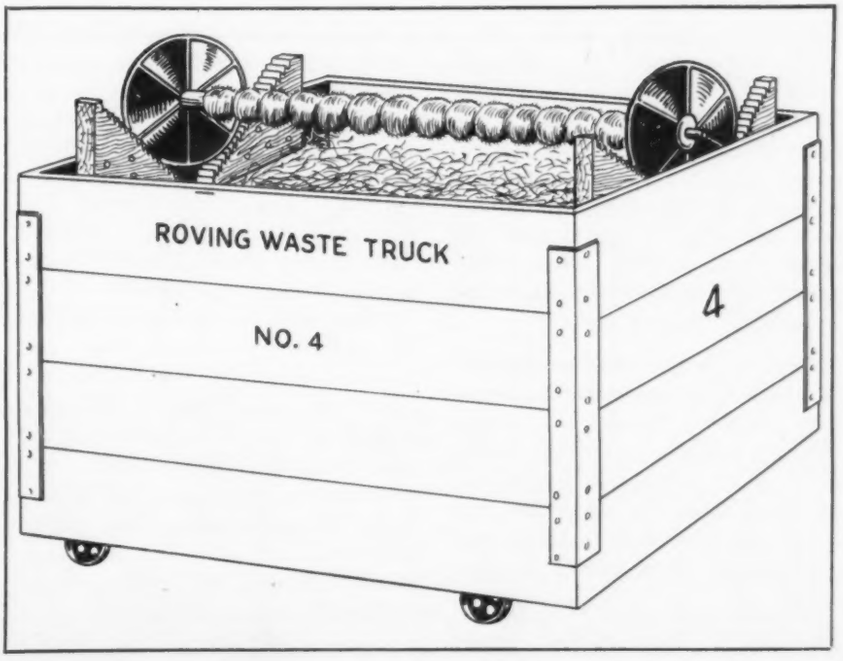
Improvised Jack Spool Doffing Stand

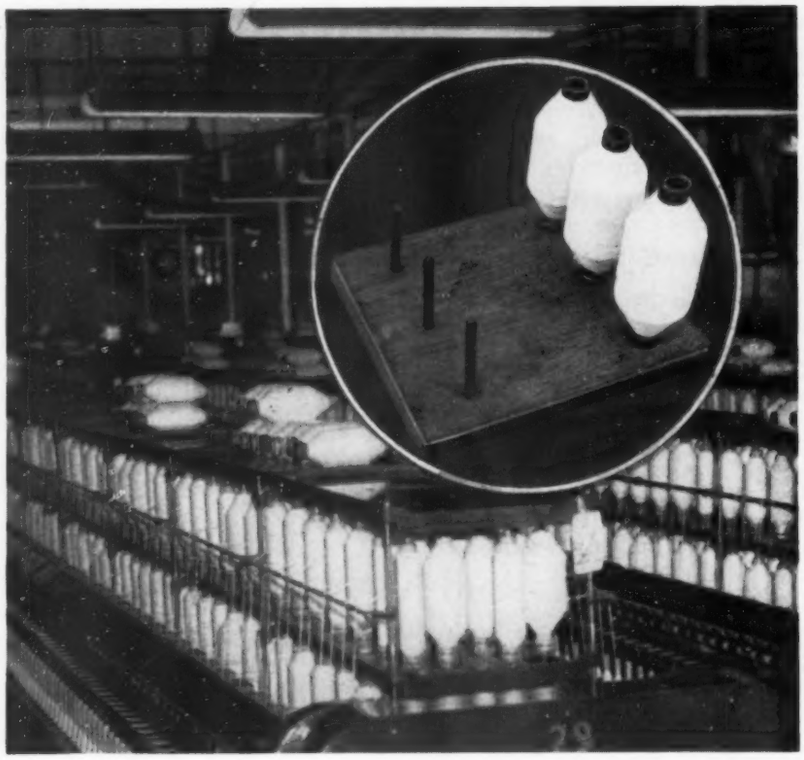
EDITOR TEXTILE INDUSTRIES:

An improvised jack spool doffing stand, shown in the accompanying drawing, has saved time and money in our woolen yarn mill. Suggested by one of the section foremen in carding, the item has become standard equipment where jack spools are handled in production.

The arrangement permits extremely coarse run roving (aver-

Notches in the cradle grip the barrel heads and prevent the spool from rotating while the roving waste is being severed. The truck is of sufficient length for the spool heads to drop into the truck, but neither lateral nor longitudinal movement is permitted.





PIN BOARD HOLDS BOBBINS UPRIGHT

Roving bobbins can be protected from being soiled, bruised or otherwise damaged from stacking on top of frames by using a pin board similar to the one shown in the inset. This arrangement holds the bobbins upright and apart from one another to prevent contacts that would cause tangles, chafed places, and other effects that would result in poor or inferior quality yarn. As shown in the picture, the bobbins stacked on top of the frames could be soiled or bruised. Poor or uneven yarn may result from having "pressed" one side of the full bobbin, thus making a bobbin of unequal density.

age 200 grains/ 50 yards) to be removed easily from a jack spool resting in the stand's cradle. The roving, which is severed from the spool by a knife, drops into the waste truck which when fully loaded is pushed up to the card hoppers for reworking.

Notches in the cradle grip the barrel heads and prevent the spool from rotating while the waste roving is being severed. The waste truck is of sufficient length for the spool heads to drop into the truck, but neither lateral nor longitudinal movement is permitted.

Formerly, the roving waste cutter rested one end of the spool on the floor while he supported the other end manually and attempted to cut the roving. Occasionally knife wounds resulted from spools slipping and the operative losing his balance.

Oftentimes the cut roving would fall to an oil stained floor and become soiled. If the waste became too dirty from coming in contact with the floor, rescouring was necessary. Extra labor was required to pick the soft roving waste from the floor and reload into a waste truck. The new jack spool doffing stand eliminates the necessity for reloading.

CONTRIBUTOR No. 8148

Reference Library From Magazines

EDITOR TEXTILE INDUSTRIES:

Recently I solved two problems with which I have been concerned through the past several years. With the hope that it may prove of value to others, I should like to pass the idea along for consideration.

The Problems:

1. What can be done to make the many textile and technical magazines of more benefit to me in my everyday problems.
2. What can be done to eliminate my technical magazines from being dust catchers and space wasters at home or at the office.

The Solution:

I purchased 12 two-ring looseleaf notebooks and labeled them as shown:

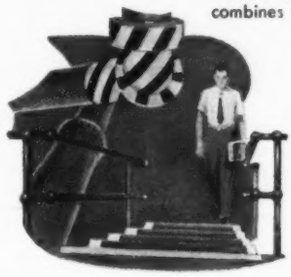
1. Opening through Slashing—Cotton
2. Weaving through Shipping—Cotton
3. Opening through Slashing—Rayon
4. Weaving through Shipping—Rayon
5. Opening through Slashing—Wool
6. Weaving through Shipping—Wool
7. Personnel
8. Time and Motion Study
9. Cost Control
10. Production Control
11. Materials Handling and Storage
12. Maintenance — Supplies — General

These can be added to or changed to suit the individual. Each month I look through my magazines and remove the articles that I think will be of value for future reference. I file these away under the proper heading in my reference library of notebooks. This takes approximately thirty minutes per magazine.

Problem No. 2 is automatically solved because I now feel free to throw away my magazines after I have gone through them each month. In case "Old-Timer" should wonder, he has a section in book No. 12 labeled "Old-Timer Says."

CONTRIBUTOR No. 8131

SHEET SEWING ROOM at Dan River Mills. In this area of critical seeing tasks, Color Conditioning combines with good light to aid visibility, improve the quantity and quality of output, and reduce accidents.



SAFETY! Du Pont Safety Color Code "points up" hazardous areas . . . helps prevent injury. Colors and symbols quickly identify first aid and fire protection equipment.

MORALE! Pleasant surroundings give employees a "lift," pay off in better morale, better care of equipment. In cafeterias, restrooms, offices, etc., COLOR CONDITIONING imparts an agreeable, efficient atmosphere.

SERVICE! A Du Pont maintenance painting expert is ready to discuss COLOR CONDITIONING with you . . . show you how it can be applied to your buildings.

DU PONT COLOR CONDITIONING

works at Dan River Mills

DAN RIVER MILLS, Danville, Va., one of the world's largest textile mills, put color to work four years ago. Benefits were apparent in a short time. Employees said weave and spinning rooms "seemed cooler," that color lessened eyestrain on delicate work around machines, let them *see* what they were doing. Result: increased production, lower accident rate, better employee morale.

Color Conditioning can work for you . . . regardless of your business. You may make fine lace or heavy machinery, in an old or modern building. Whatever the case, it *pays* to help employees see better, feel better, work better . . . through Du Pont Color Conditioning.

And Color Conditioning costs no more than ordinary maintenance painting . . . *less* in the long run. Mail coupon for full information. No obligation, naturally.

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . .
THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division
Wilmington 98, Del. Dept. TI-93

Please send me, without obligation, your 32-page book, "Color Conditioning for Industry."

*Name*_____

*Title*_____

*Firm Name*_____

*Address*_____

WARP SPINNING BOBBIN

STRAIGHT SIDE

The spindle top fits the "cushion-grip" with a gentle squeeze to make top-drive contact, which breaks sharp and easy without drag or pull in doffing.

A straight side bobbin and a straight side spindle acorn mean constant uniform clearance at this point, which is essential in maintaining top suspension drive.

SONOCO

Makes Everything in Textile Paper Carriers

Constant improvement of the SONOCO (Straight Side) Warp Spinning Bobbin continues to accentuate its *5 distinct advantages.*

1. **Easier doffing—breaks clear at top.**
2. **Uniform tension—from parallel sides.**
3. **Larger package—permits full traverse.**
4. **Positive clearance on spindle acorn at base.**
5. **Top drive contact—cushion grip feature.**

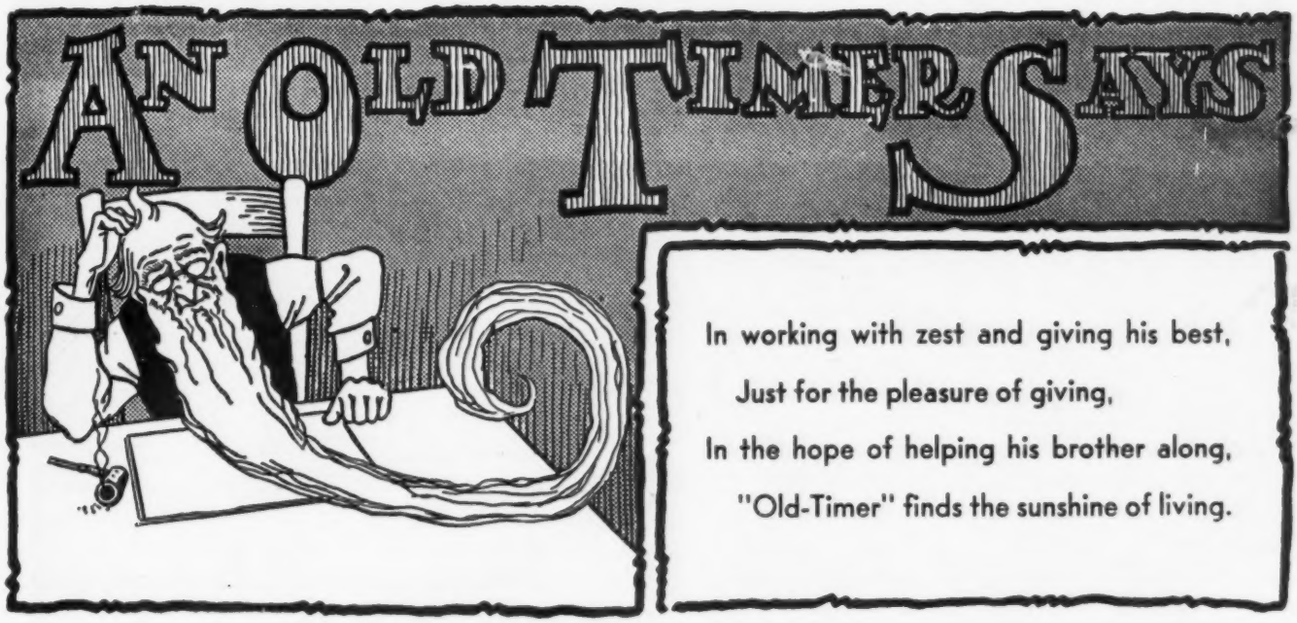
With added toughness to withstand rough handling, the SONOCO Bobbin is the only warp spinning bobbin to include all the above advantages plus long wear.

SONOCO 50th ANNIVERSARY YEAR SERVES THE WORLD

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

YOU: How Well You Understand Human Actions

WELL, brother, understanding human actions is not a gift. That is, it is not just natural for an overseer or superintendent or manager to know how ten or a hundred operatives are going to react to that new system you wish to put into effect.

We believe the great majority of operating executives act too quickly in puting any change into effect. Or possibly we should say that they do not give the problem as much study as they should. If it is a change for weavers, do you know what the loom fixers think of it? Have you discussed the matter with all of your subordinates? How much real research have you done or had done concerning the problem or system? Do you really understand the people you have talked the matter over with; do you know their backgrounds and how their past experiences are likely to affect the answers they give you? There are many small, seemingly insignificant things which will influence the answer a man gives you.

In a study of human nature, the two most important items are probably How and Why. If you throw a switch you can see *how* the electric current starts the machine. This action of the machine may be likened to *how* an operative reacts to the new system you wish to inaugurate, but the *why* is often something you cannot put your finger on. That is, *why* some operatives will object so strenuously to a request or an order which probably a majority of operatives would fall in line with without any trouble.

That *why* part of determining a human being's reactions is the hard nut to crack in most cases. However, regardless of how complex a situation may seem to you, remember there is an answer, and if you are the student of human nature every overseer, superintendent, or manager should be, you will dig deep enough to find that answer.

Most people, that is operating executives, are endowed with the ability to find the *why* of such problems. The principal reason most of us do not succeed in such problems is that we do not take the time and have the necessary patience. We shoot too quickly. That is one of our assets we need to build up.

RANDOM THOUGHTS:

The Four "Musts"

FOUR "MUSTS": 1. Work every scheme possible to encourage employees.

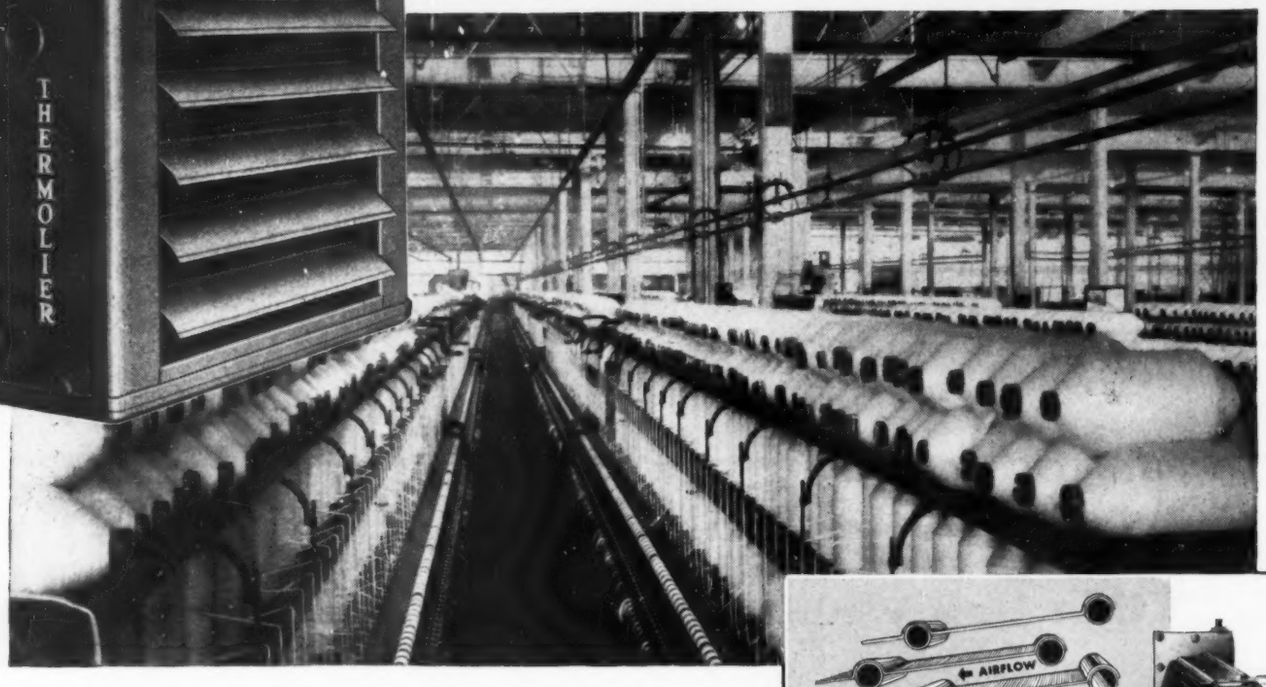
2. Solicit opinions from subordinates. They are closer to employees than you are.

3. Publicize those operatives who lead in production and quality. (Quality will be far more important a year from now.)

4. Avoid the least vista of favoritism.

Did you notice some "perk-up" of enthusiasm in your operatives during the war, and do you realize that enthusiasm has faded away now? Well, can't some smart guy think of a way to arouse that same enthusiasm in operatives without having to have a war?

More economical maintenance... More efficient heating!

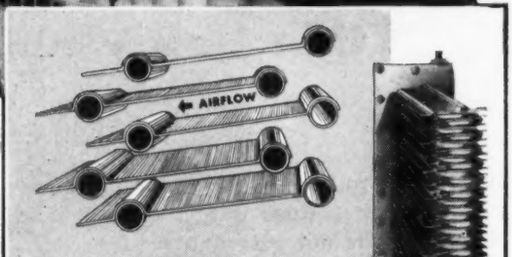


with the self-cleaning

TEXTILE THERMOLIER

Incorporating all the features that have made the standard THERMOLIER a leader, the new TEXTILE THERMOLIER banishes the problem of clogging and loss of heating capacity, and cuts cleaning to almost nothing.

TEXTILE THERMOLIER proved its superiority in this actual weave room test. A conventional unit heater clogged solid in four days . . . its heating capacity was lost as clogging increased . . . finally it had to be shut down for a prolonged cleaning period. After three weeks of operation, TEXTILE THERMOLIER showed negligible accumulation . . . it was quickly cleaned with an air hose.



Cutaway view of heating element showing unobstructed air flow passages (drawn to exact scale)

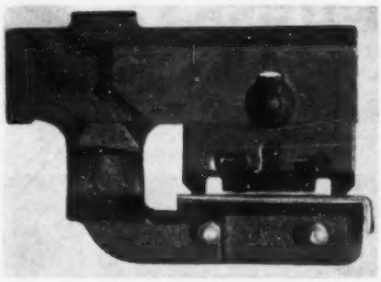
- Free flow of air self-cleans the heating surfaces. Lint, fly and dirt sweep clean from horizontal trailing edge.
- Maximum capacity provided at all times and annoying and destructive water hammer eliminated because built-in pitch of tubes and internal cooling leg assure continuous drainage of condensate.
- Safety and durability assured with leak-proof tube-to-header construction.
- Plain thermostatic trap, the simplest and least expensive kind of trap, made practical because of Thermolier's exclusive internal cooling leg. Write for the full story.

99 YEARS WHENEVER PIPING IS INVOLVED

GRINNELL

Grinnell Company, Inc., Providence 1, Rhode Island. Branches: Atlanta • Buffalo • Charlotte • Chicago • Cleveland • Cranston • Fresno • Kansas City • Houston Long Beach • Los Angeles • Milwaukee • Minneapolis • New York • Oakland • Philadelphia • Sacramento • St. Louis • St. Paul • San Francisco • Seattle • Spokane

NEW EQUIPMENT
AND MATERIALS



Auto-Nip slub catcher (Universal).

Slub Catcher for Worsted and Spun Rayon Yarns

A new type of slub catcher, called the Auto-Nip Slub Catcher, was designed primarily to inspect worsted and spun rayon yarns spun on the American system of spinning.

The new slub catcher is said to be very effective in slubbing soft slubs, especially of the torpedo type. Skinbacks are minimized due to the fact that the device permits a much larger opening than is possible when trying to catch these soft slubs with a fixed blade type of slubber.

The slub catcher consists essentially of a bracket upon which the device is mounted, a small pivoted leaf—the bottom of which has very finely tooled serrated teeth, a small coil spring which tensionizes the leaf, and an anvil which is placed opposite to the swing lever mount.

The action of the device is as follows: The yarn is run underneath the leaf and whenever a soft slub is detected by the serrated edges of the pivoted leaf, the leaf pivots downward against the anvil and the end is broken.

The opening of the slub catcher to meet the inspection requirements of various counts can be accurately and easily accomplished by means of a feeler gauge.

The slub catcher can be readily installed on any standard No. 44 tension bracket. Therefore, it can be used individually or in conjunction with a fixed blade slub catcher device.

Universal Winding Co., Providence 1, R. I.

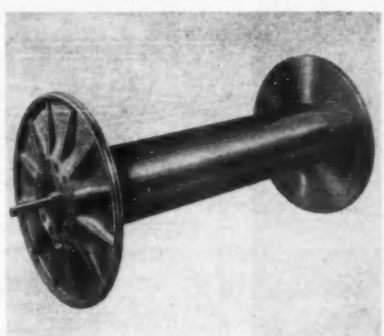
For additional data, request item C-115, using business reply card on page 222.

All-Purpose Section Beam

A new aluminum section beam for all fine denier synthetic yarns has recently been introduced. The beam is all aluminum except for the steel head inserts and shaft, thus assuring high strength with low weight—an important factor in better performance and easier handling.

The head is rib reinforced to withstand the pressures exerted by various types of fine denier synthetic yarns when warped to full capacity.

An important feature of the beam is the removable head. Both heads may be detached from the barrel in a matter of minutes in case of accidental damage, and any part of the assembly may be replaced individually. Shafts also are removable, having specially designed journals to permit this feature.



Aluminum section beam for fine denier synthetic yarns (Hubbard).

The beam is well balanced to assure free flow of yarn from the beam. All surfaces coming into contact with the yarn are highly polished.

Hubbard Spool Co., 1627 Carroll Ave., Chicago, Ill.

For additional data, request item C-101, using business reply card on page 222.

Versatile Plastic Material

Versalite is a thermoplastic material so named because of its versatility, toughness and resistance to high impact. It is obtainable in several standard thicknesses and sheet sizes. The material is unique in many respects, and it can be compounded to varying degrees of hardness ranging from leather to a hard boardlike material. It is opaque and can be obtained in a variety of colors and embossed finishes.

Versalite is substantially inert and is resistant to acids, oils, caustics, fats, and moisture.

United States Rubber Co., 2638 North Pulaski Road, Chicago 39, Ill.

For additional data, request item C-155, using business reply card on page 222.

New Shuttles for Rayon

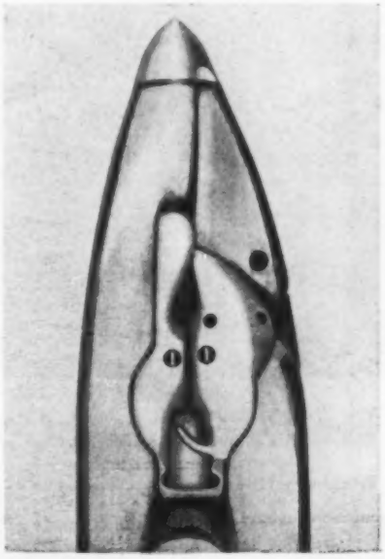
The S7X center tension eye shuttle for reverse wind (S7 for regular wind) on S5 and S6 looms is a new development. The eye has solved reverse wind rayon crepe filling troubles, it is claimed, thereby increasing weave room production.

The S7 and S7X eyes hold the thread in perfect alignment and constantly down in place, according to the manufacturer. The extra narrow slot in the eye, the shuttle's full shoulder at the front of the bobbin chamber, and the generous-sized, precision-made hook combine to keep the filling always straight before it reaches the steel encased tension pads. These tension pads have recently been extended up into the eye so that the filling cannot get in behind the pads.

Watson-Williams Mfg. Co., Millbury, Mass.

For additional data, request item C-108, using business reply card on page 222.

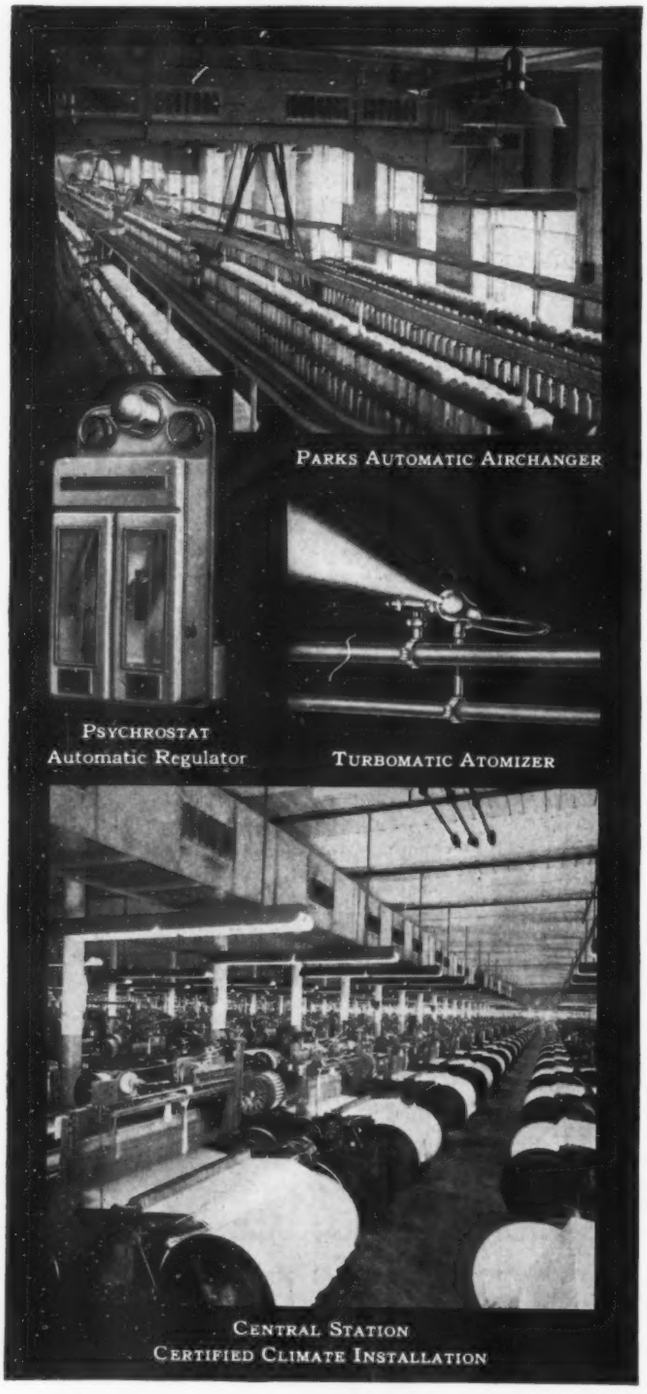
The S7X center tension eye shuttle (Watson-Williams).



Certified CLIMATE

is better climate . . .

often pays for itself in a year



PARKS AUTOMATIC AIRCHANGER

PSYCHROSTAT
Automatic Regulator

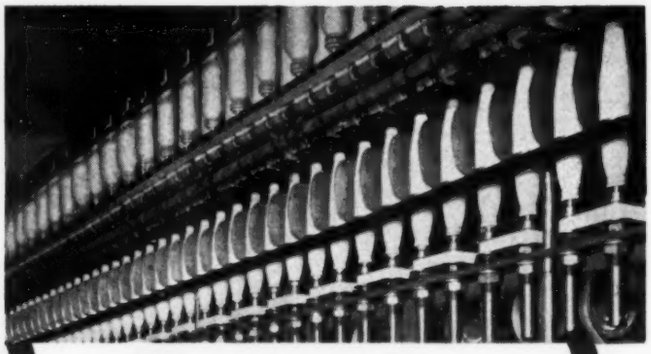
TURBOMATIC ATOMIZER

CENTRAL STATION
CERTIFIED CLIMATE INSTALLATION

Parks-Cramer Company

Fitchburg, Mass. — PARKS Certified Climate — Charlotte, N. C.

Bothered with oil drip from roll necks?



Change to NON-FLUID OIL

Looking for an oil that will positively stay on roll necks and off leather and cork cots?

7 out of 10 mills today use NON-FLUID OIL for top and bottom rolls and saddles of long draft frames. They get greater production of clean yarn at lower lubricant cost . . . for NON-FLUID OIL does not creep or crawl and lubricates constantly until entirely used up.

Write for Bulletin T13TI and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 Madison Avenue New York 17, N. Y.

Southern District Manager
FALLS L. THOMASON, Charlotte, N. C.

Warehouses:
Charlotte, N. C.—Greenville, S. C.—Atlanta, Ga.—Providence, R. I.—Detroit, Mich.—Chicago, Ill.—St. Louis, Mo.
Works: Newark, N. J.

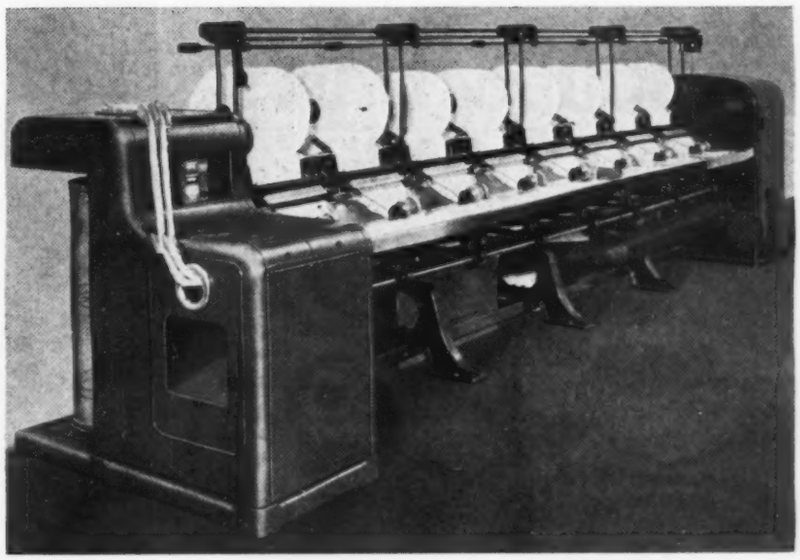
NON-FLUID OIL is not the name of a general class of lubricants but is a specific product of our manufacture. So-called fluid grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

NON-FLUID OIL
TRADE MARK REGISTERED

Whitin Announces New High Speed Comber

The Model "J," eight-head, high-speed comber has been added to the line of improved machines available to the textile manufacturers.

Some of the important developments incorporated in the Model "J" comber are: an improved detaching roll motion, redesigned nipper frame and top comb, spring weighting, increased production, additional streamlining and a reduction in horsepower required per pound of sliver produced.



The Model "J" eight-head, high-speed comber by Whitin.

Precision Construction. Component parts are machined and bored to extremely close tolerances, resulting in machine-tool precision and smooth running operation, lack of vibration, reduction in noise, and a marked decrease in wear. When parts do have to be replaced, they may be replaced with little or no machine down time and consequent loss of production.

Head and Foot End Redesigned. The head and foot ends are completely enclosed, smooth, streamlined compartments, which in no way interferes with accessibility. The motor and fan for the aspirator have been installed inside the head end where they are free from dust and lint. All corners have been rounded off, surfaces smoothed and projections eliminated to make cleaning easier. Wide swinging doors bring the assemblies within easy reach.

The coiler can assembly and gearing in the foot end are completely enclosed. The coiler is now an integral part of the comber instead of being an attached unit, and the new design promotes better functioning of the coiler and keeps the sliver under control until it is deposited in the coiler can. The complete enclosure has the advantage of lint, dust, and dirt exclusion, while the can itself may be removed when filled and an empty can inserted.

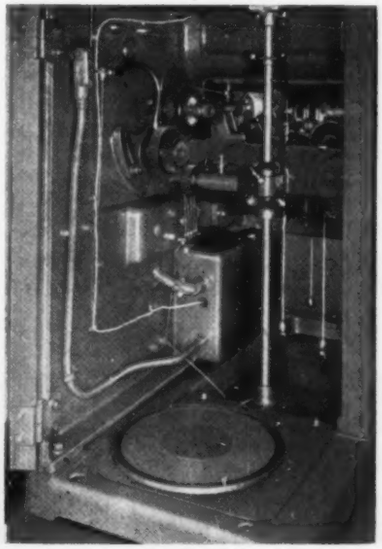
The reservoir of the Bijur one-shot lubrication system is located in the head end. The system supplies oil to 82 points in the comber, and it is so controlled that operation of the pump manually twice during each shift is sufficient to keep these points properly lubricated.

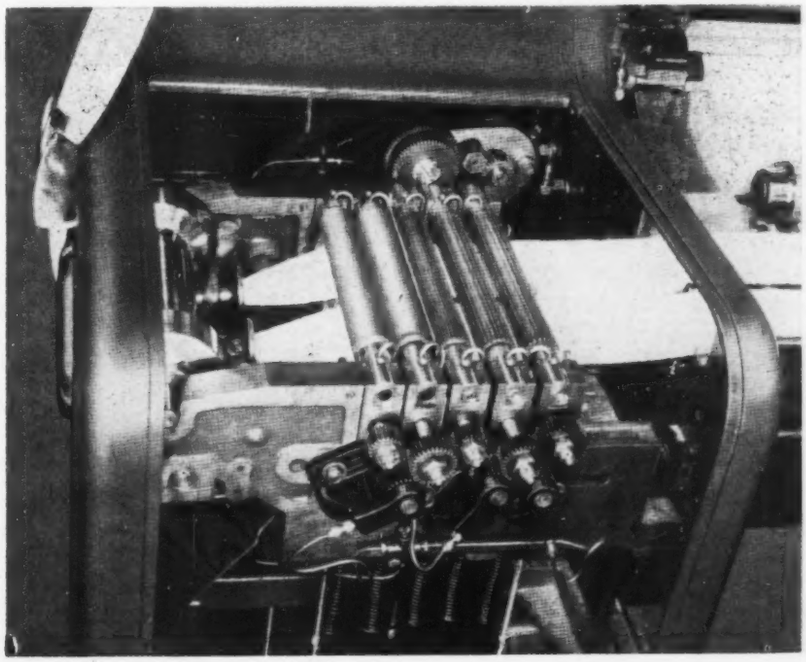
The inclusion of all moving parts in the head and foot ends contributes to the safety of the operators and reduces the possibility of accidents while cleaning.

Bi-Coil Sliver. A 14-inch coiler can carried on a can-table that receives a circular but non-rotating motion now takes two slivers instead of the usual single sliver. The two slivers are smoothly coiled, are free

Right, view of draw roll box.

Below, built-in coiler at foot end.

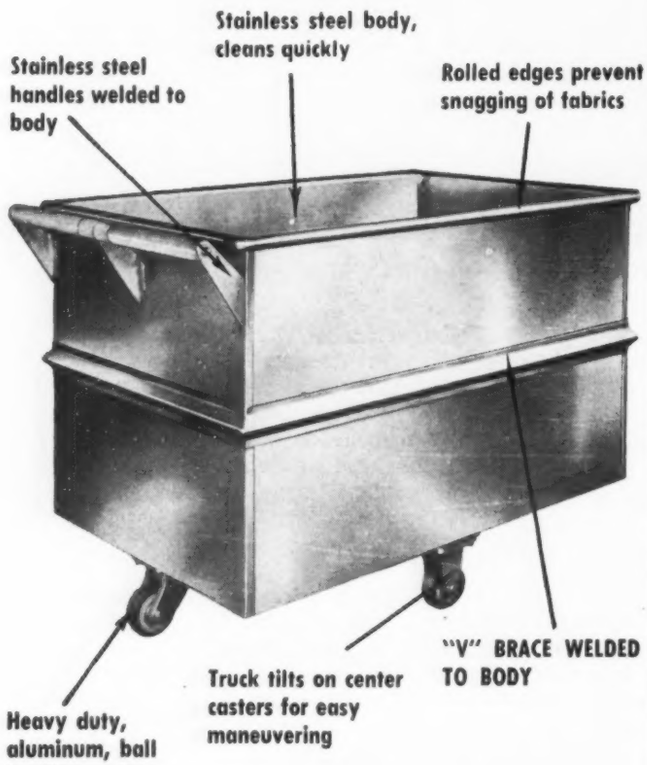


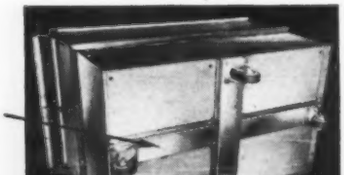


New Stainless Steel

WET GOODS TRUCK

- EASY TO CLEAN
- SNAG FREE
- RUGGEDLY BUILT


Stainless steel body, cleans quickly
Stainless steel handles welded to body
Rolled edges prevent snagging of fabrics
"V" BRACE WELDED TO BODY
Truck tilts on center casters for easy maneuvering
Heavy duty, aluminum, ball bearing casters



This is the wet goods truck dyers have always wanted . . . built to stand rough handling for years . . . easy to clean . . . snag free . . . a truck designed to cut your handling costs. Standard width 3 feet, depth 30". Standard lengths 3 ft., 4 ft., 5 ft., 6 ft. Also built in sizes to meet your requirements. Send for Bulletin 7032.

S. BLICKMAN, INC. 207 GREGORY AVE. WEEHAWKEN, N. J.

Blickman Built
STAINLESS STEEL TEXTILE EQUIPMENT
Dye Boxes, Linings, Cylinders, Dry Cans, Hoods, Tanks

COLE

TANK DESIGNING BACKED BY 95 YEARS EXPERIENCE

WE have specialized in the design, fabrication and erection of elevated tanks, and vessels for the storage of textile liquids, for four generations.

We build dye-vats, kiers, starch-kettles, acid tanks, jib-boxes and other processing vessels for the finishing and dyeing industry—in stainless steel, nickel-clad steel, or of standard steel lined with Monel metal.

Our long experience in the design and fabrication of elevated tanks and vessels for the textile industry may be of help to you. Write for latest Cole catalog—"Tank Talk."

R. D. COLE
MANUFACTURING CO
NEWNAN, GA.

Established 1854

from twist, and retain their own identities, yet are easily separated when being fed to the drawing frame. The specially designed can-table and coiler can motion solves the problem of handling the two slivers, and reduces the number of cans needed in the drawing process by 50 per cent.

Draw Box. The draw box has been widened to allow the web to be spread over a greater roll surface resulting in a better holding of the fibers while drafting. The web is split into two parts at the draw box and by low drafts at slow speed, better drafting of the fibers is made possible than that made by the conventional drafting mechanism.

Increased Production. Production capacity has been increased.

By means of a new cam and gearing arrangement for operating the detaching rolls, the number of the combing cycles has been increased to 150 per minute. This is an increase of 27 per cent over what has heretofore been common with other combers. Not only has the rate of production been increased, but the quality of the product and uniformity of the sliver is much better. The piecing or overlapping of the successive tufts now results in a better distribution of the fibers and a more uniform sliver.

Detaching Rolls. The detaching motion produces a better piecing or overlapping of the fringe upon the tail of the combed web than could be made with other detaching motions. A more uniform piecing is made, and consequently a more uniform sliver is produced. The new motion operates smoothly and allows the comber to run substantially free from vibration.

Nipper System. The new nipper and top comb assembly allows the nippers to move in a path concentric with the cylinder while the fringe is being combed by the cylinder needles, thus assuring maximum combing by the cylinder half-lap needles.

Top Comb. The top comb is supported by and moves with the top nipper frame. The new motion for operating the nippers also controls the movement of the top comb to cause its needles to penetrate the tuft better in order to comb that part of the fibers not combed by the cylinder needles.

Detaching Roll Drive. The mechanism for operating the detaching rolls is located in the head end where it and the brush chain drive are completely enclosed in an oil chamber which insures lubrication of the moving parts.

The teeth of the gears have been "shaved." This operation produces gear teeth to remarkably close tolerances in pitch, run-out, and back lash.

Spring Weighting on Rolls. Spring weighting has been applied to the feed rolls, the detaching rolls, and to the draw box rolls. Each combing head is provided with a lever and a new saddle arrangement for permitting easy and convenient removal of any top detaching roll without disturbing the remaining rolls.

The draw box is provided with a new device for releasing the pressure on the drafting rolls when desired. A rod extending continuously lengthwise of the comber engages the levers at the combing heads and also with the draw box releasing device. By a partial rotation of the rod by the operator, the roll pressure is released at all the combing heads as well as releasing the pressure on the rolls in the drawing box.

Such roll pressure releasing is desirable when the comber is stopped for a considerable period of time. When the roll pressure is released, there is a switch operated by the rod to break the power circuit so that the motor is prevented from starting up while the roll pressure is is released.

Whitin Machine Works, Whitinsville, Mass.

For additional data, request item C-156, using business reply card on page 222.

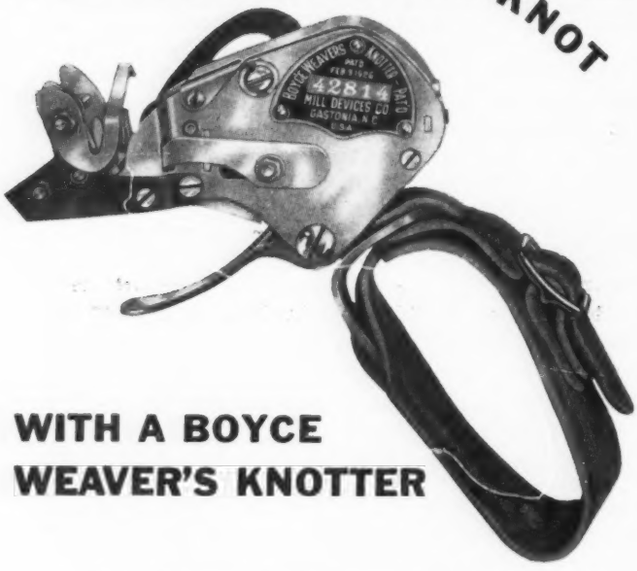
TURNING THE LOAD

The handling of heavy rolls has been facilitated and made easier through the installation of floor trackage conveyors. This trackage crosses the entire room and has a turntable for three directional operations to turn the rolls from main track to side track leading to the machine. A four-way turntable for moving loads across the room while the track in the other direction is also available.

Another recent development for turning loads is the new Angular Fan-tail. The unit itself is stationary, and the load is easily turned on the movable balls rather than on rollers. The load can be turned in any direction and where it is finally conveyed depends entirely on the number of tracks which lead to and from this new ball-bearing device.

Engineering Products Company, 122 South Michigan Ave., Chicago 3, Ill.

For additional data, request item C-157, using business reply card on page 222.



WITH A BOYCE WEAVER'S KNOTTER

The Boyce Weaver's Knotter does so much more than tie a weaver's knot.

IT SAVES TIME

with a fast, smooth action that permits an experienced operator to tie more than 5,000 knots during a regular 8-hour shift.

IT SAVES MONEY

by eliminating dirt and perspiration stains so often found in hand-tied knots.

IT IMPROVES YARN QUALITY

with a strong, uniform knot whose ends are clipped clean and even—a vital factor in the winding room and processes which follow.

MILL DEVICES COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA N. C.

REPRESENTATIVES

C. E. HERRICK, 44 FRANKLIN STREET, PROVIDENCE, RHODE ISLAND
R. D. HUGHES SALES CO., 2201 CEDAR SPRINGS, DALLAS 1, TEXAS
HUGH WILLIAMS & CO., 47 COLBORNE ST., TORONTO 1, CANADA

PRECISION BOBBINS • PRECISION BOBBINS • PRECISION BOBBINS •

New Carbonizing Dryer for Wool Piece Goods

A new type bottom entry dryer has been developed for carbonizing woolen piece goods. The cloth enters the machine at the second pass from the bottom. Here it comes in contact with air at approximately 180 degrees F. The air in this zone is heated through a heater which is controlled by its own individual temperature controller and passes into its own fan.

The cloth then passes to the next zone of the dryer where the temperature is approximately 210 degrees F. The air in this zone is also heated in an individually controlled heater as in the bottom zone. The third zone has an air temperature of 230 degrees F., and the fourth zone has a temperature of approximately 260 degrees F. Since the low temperature is at the bottom and the high temperature at the top, it is possible to maintain a uniform rise of temperature from bottom to top.

The fans and heaters used in this new type tenter dryer have been satisfactory in other dryers, the only difference being that each layer of fans has its own individual heater. The arrangement of the fans and heaters makes the dryer readily accessible at all points for cleaning or repair. The location of these units assures a uniform air velocity on the cloth being dried.

Following are advantages claimed for the bottom entry pin tenter dryer:

1. The goods are held on the pins in a flat condition while being dried and baked, which results in the elimination of streaks due to pull. This eliminates the necessity of an operator having to go in the dryer during operation to keep the goods out the full width.

2. The drying and baking time in this dryer are reduced to approximately one third the time required in a roll type dryer, due to the fact that the volume of air circulated in the dryer is several times that of a roll type dryer. This means that the drying is accomplished much quicker, and the heating up of the burrs to carbonizing temperature is also accomplished much quicker. This decreased time of drying and baking results in two very important advantages, the first being that the goods come out of the machine with no yellowing even when using sulphuric acid, and the short time which the wool is subjected to a high temperature is advantageous.

3. The drying and baking in this machine is very uniform due to the location of the fans and the heaters, and also due to the very large volume of air being circulated. This also gives more level dyeing.

4. It has long been recognized that acid goods should be dried at a low temperature, and only with the bottom entry type of dryer is it possible to accomplish this when drying the cloth on pins. Condensation is eliminated.

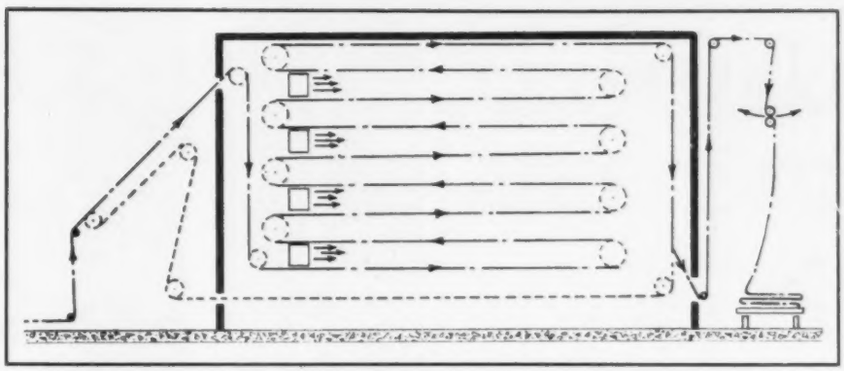
5. In an ordinary roll type of dryer there is a considerable amount of warp-wise stretch of the goods due to the fact that the cloth has to drive all of the rolls. This is eliminated in the tenter dryer, and the cloth can be fed on the pins with the warp in a relaxed condition by means of an overfeed.

6. Another advantage in using this type of tenter dryer for carbonizing is that in case of a breakdown on the regular "Sweet" dryer, this dryer can be used for that purpose. Mills with limited production have found it advisable to install one of these dryers to take care of both the carbonizing and sweet drying.

The dryer has a holding capacity of only 45 yards and can carbonize 18-ounce coverts at 8 yards per minute, which means a drying and baking time of slightly less than six minutes. Ten-ounce goods can be carbonized at 15 yards per minute, giving a drying and baking time of three minutes.

James Hunter Machine Co., North Adams, Mass.

For additional data, request item C-158, using business reply card on page 222.



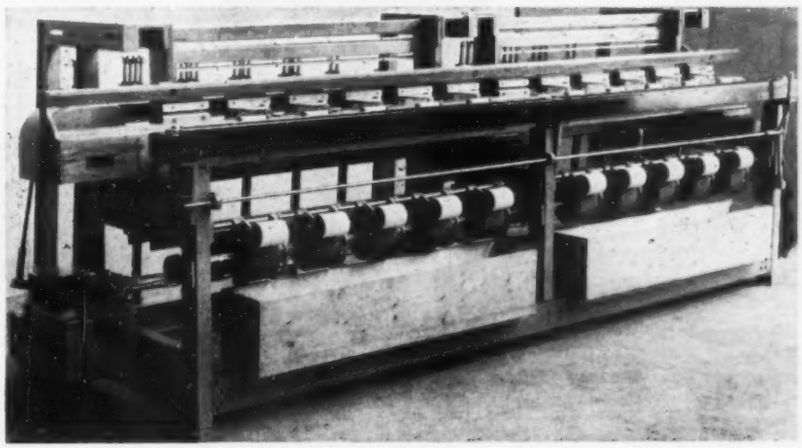
Bottom entry dryer for carbonizing woolen piece goods (Hunter).

Multi-Shuttle Ribbon Loom

A new narrow fabric loom has been recently introduced. The loom accommodates sheet warps instead of tape warps, and there are ten shuttles per loom. The width of the race and space available determines the variation in the number of shuttles to be used on any given fabric.

Of straight lay design, the loom is provided with an emery-covered roll on which the cloth is wound for removal. A rack and pinion drive actuates the shuttles. The lay is mounted on chairs which run on cast

The multi-shuttle ribbon loom (Wilkinson).



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Enjoy the advantages of easily movable equipment, full protection of floors and the elimination of damage to equipment due to wracking - at no additional expense over ordinary casters and wheels.

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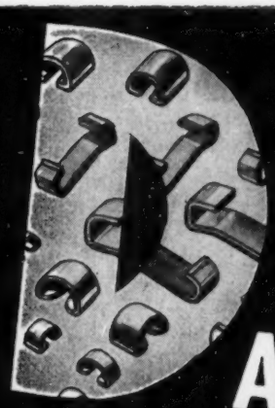

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JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.

iron slides and are guided by hardened rollers.

Warp threads pass through a back reed and over a back roller before entering the heddles. It is said that this system allows the weaver to repair broken ends more quickly than on older model looms. Cams operate the harness shafts from below, and for eight levers sixteen cams are used, thereby giving a positive drive in both directions to the shafts. The cam box is designed for quick change and can be supplied with cams for 1/1, 2/2, 3/1, and 1/3 weaves.

A low center of gravity is featured for running at high speeds with a minimum of vibration. The loom has operated at speeds of 160 to 190 picks per minute, but the manufacturer states that a speed of 200 picks per minute is satisfactory.

The amount of shed is adjusted by means of hand screws located on the tops of the cam levers. The range of these screws gives from 2½ to 3" shed. The breast piece is adjustable, and the three-throw crankshaft is mounted on self-aligning bearings.

T. F. Wilkinson & Co., Ltd., Paynes Lane, Coventry, England.

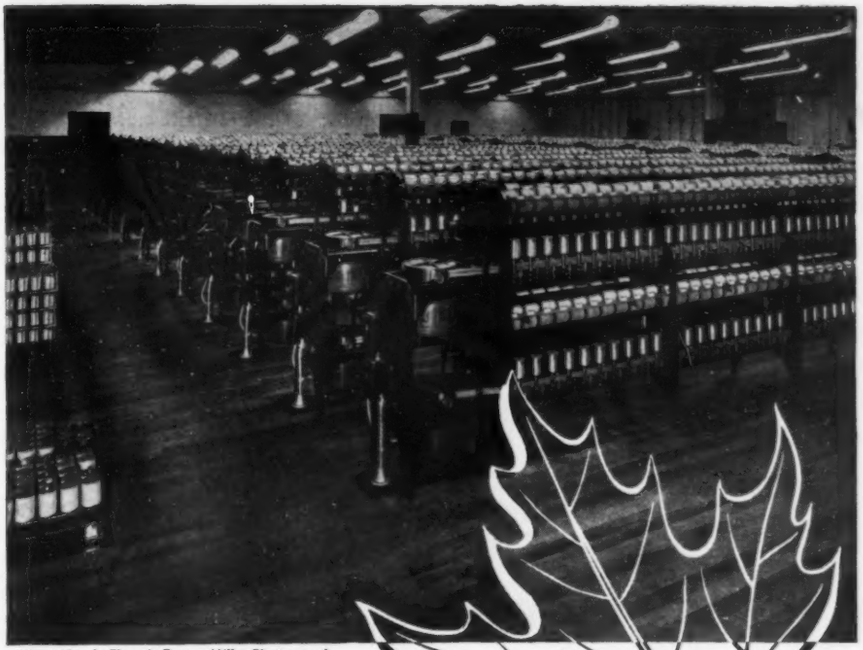
For additional data, request item C-159, using business reply card on on page 222.

Electronic Speed Control for Small Power Tools

A low-cost Thy-mo-trol drive, known as the Type H1, has been announced. Furnished in ratings through ½ hp, the new drive utilizes a simplified half-wave circuit to provide d-c flexibility from a-c power.

It is specially designed to provide, by the turn of a knob at a

Thy-mo-trol drive (GE).



Hard Maple Floor in Rayon Mill—Photograph Courtesy Westinghouse Electric Corporation

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NORTHERN HARD MAPLE for greater efficiency

• Northern Hard Maple is *the truly resilient* flooring for workers' comfort in textile plants. Smooth Northern Hard Maple is a *comfortable* floor—warm and dry. Its resiliency holds off fatigue—cuts down the accidents and mistakes that occur because workers are tired.

A floor of Northern Hard Maple is a true floor—not a floor covering. And, the *long life* of Hard Maple and low maintenance cost mean sound investment value to mill owners.

Yes, Northern Hard Maple Flooring keeps efficiency *up* and keeps costs *down*. Smooth-surfaced; Hard Maple Floors create no dust, do not catch lint, can be cleaned by brushing alone, speeds up traffic, and cuts floor costs all along the line.

You will find Northern Hard Maple the ideal floor for textile mills. Its superiority is acknowledged—consider **MFMA** (trademarked) Maple. Your engineers are well acquainted with this fine flooring. Association supervised and guaranteed.

See Sweet's

Section 13/g/6, for catalog data. Write us about your maintenance and floor finishing problems.

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CROZER — Genuine Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

LYNCO — High fusion coking coal for by-product, industrial stoker and pulverizer use from Wyoming Co., W. Va., on the Vgn. Ry.

Old Kentucky — Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.

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single control station, smooth stepless speed control on small lathes, grinders, drill presses, conveyors, pumps, packaging equipment etc.

The drive operates from 220-volt 60-cycle a-c (for other voltages a suitable anode transformer is available). It has a 20-to-1 speed range from 1725 to 86 rpm and operates efficiently in ambient temperatures from 50 to 104° F. It is furnished in either the non-reversing or the reversing type, the latter being equipped with a separate magnetic reversing switch.

General Electric Company, Schenectady 5, N. Y.

For additional data, request item C-116, using business reply card on page 222.

Mass Handling Techniques Featured in New Movie

An exceptionally informative industrial sound-movie is now being released for showing at groups and meetings by the Towmotor Corporation of Cleveland, Ohio. With the appropriate title of "The One-Man-Gang," this thirty-minute picture takes its audience into the plants of a number of leading manufacturers to show the exact methods that are being employed to make reductions in the costs of materials handling.

Frequent demonstrations of the various Towmotor models and accessories are presented. Many of the operations made possible by the crane arm, extension forks, revolving carriage, unloader, side shifter, extension back rest, ram, scoop, upender and overhead guard, are included.

Liquid Wetting Agent and Detergent

A new liquid wetting agent and detergent of the alkyl aryl sulfonate type has been announced. A pale lemon viscous fluid, it is sold under the trademark Santomerse 30-X. The product is especially designed to give quick and effective wetting at low unit cost.

The agent is a clear, extremely light colored solution, containing 30% solids. The solids content is made up of approximately 85% active alkyl aryl sulfonate and 15% sodium sulfate. It has resistance to decomposition by either strong acids or alkalies, and is recommended for wet processing of textiles and many other applications where surface tension reduction and quick wetting are desired.

Monsanto Chemical Company, St. Louis 4, Mo.

For additional data, request item C-160, using business reply card on page 222.

DO YOUR EMPLOYEES WALK LIKE THIS?
. . . then it's time to ELIMINATE SCRUBBING and DRY CLEAN your Mill Floors with the TENNANT System
When workers walk like cats, to avoid falls on slippery, oily floors—it calls for prompt action: dry-cleaning with the Tennant System! You eliminate scrubbing, save man-hours, get cleaner, safer floors . . . and cut cleaning costs, too.
THE TENNANT System . . .
1. RECONDITIONS worn, dark floors.
In a few minutes any floor surface can be made like new . . . free of water- and oil-soaked, grimy topwood fibers. Provides a vigorous, smooth floor —sound and dry.
2. HARDENS floors to resist wear.
Rapid, effective sealing process fills . . . binds . . . hardens wood fibers. Gives excellent wear resistance and durability.
3. DRY CLEANS . . . ends scrubbing.
Fast mechanical cleaning removes dirt like magic! No water or chemicals. Leaves brilliant non-slippery surface that's velvety smooth, clean, dirt-resistant.
WRITE TODAY for FACTS about dry-cleaning, the accepted modern way to get the most from your mill floors. Typical case histories, cost data, results obtained with the TENNANT System.
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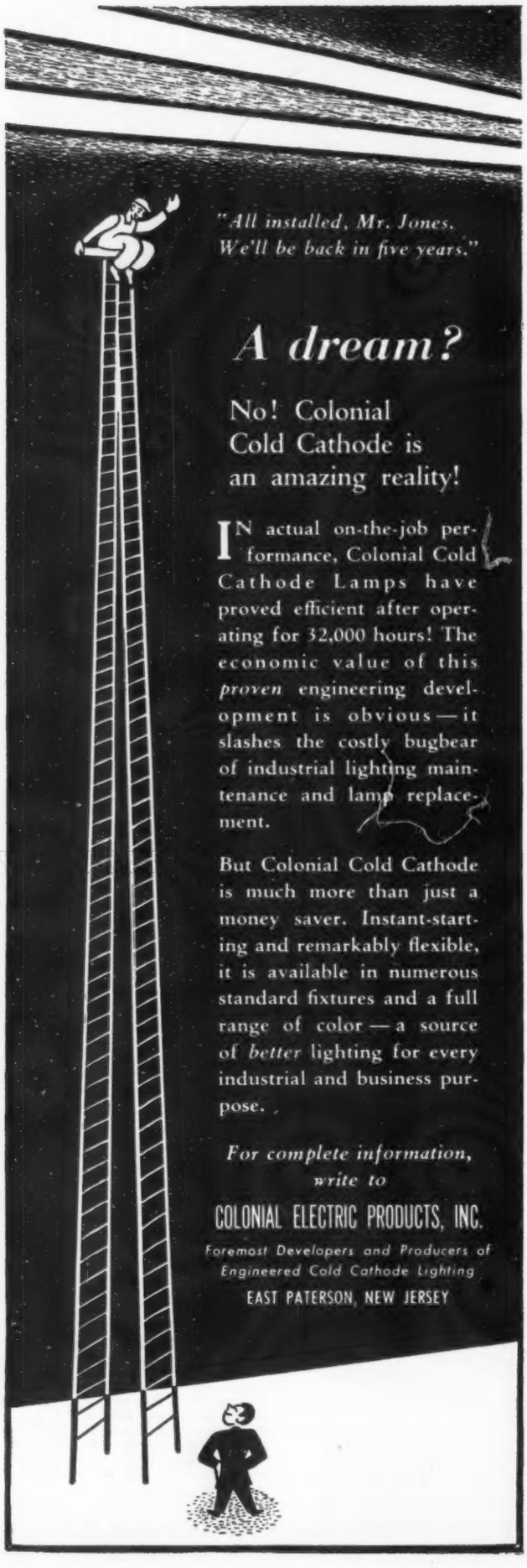
The way to finer floors
TENNANT
Floor Maintenance System
A one-man operated Tennant Floor Machine CLEANS FLOORS AND PICKS UP SOILAGE!
Self-propelled Tennant Floor Machine has 12" or 16" revolving steel wool roll (or other accessory) that whisks grime from floor. Heavy soilage is hurled into hopper; vacuum picks up light dust. LEAVES FLOOR CLEAN!
The Tennant System ENDS SCRUBBING and can be used throughout the mill


"All installed, Mr. Jones. We'll be back in five years."
A dream?
No! Colonial Cold Cathode is an amazing reality!
IN actual on-the-job performance, Colonial Cold Cathode Lamps have proved efficient after operating for 32,000 hours! The economic value of this *proven* engineering development is obvious — it slashes the costly bugbear of industrial lighting maintenance and lamp replacement.
But Colonial Cold Cathode is much more than just a money saver. Instant-starting and remarkably flexible, it is available in numerous standard fixtures and a full range of color — a source of *better* lighting for every industrial and business purpose.
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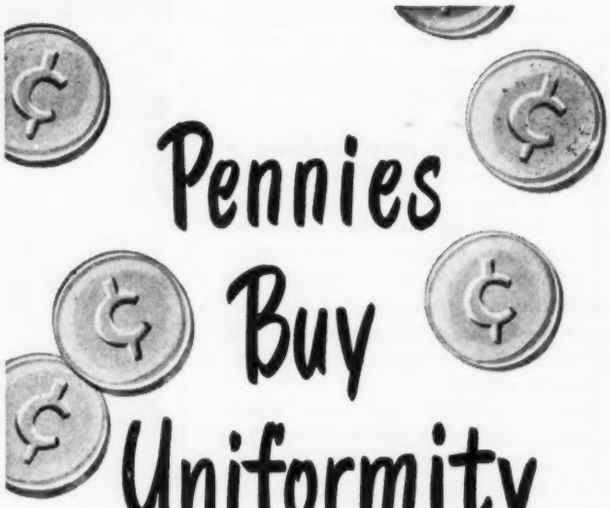
EAST PATERSON, NEW JERSEY



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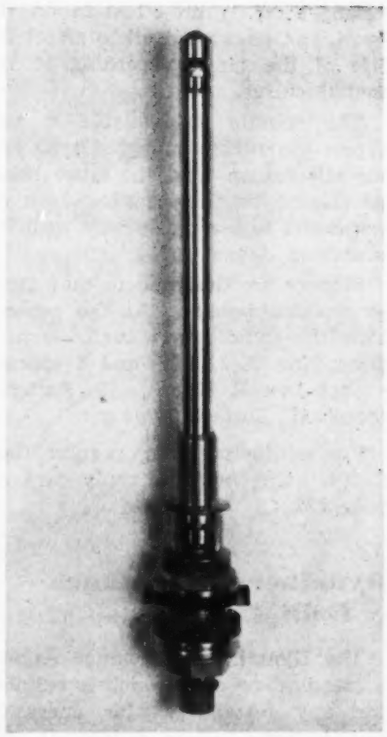

Cut-away view of the New Era spindle (Saco-Lowell).

New Era Spinning Spindle Availability Announced

Although the New Era spindle has been in use in several mills (on trial frames) for several years, the advent of World War II and the resulting scarcity of materials restricted its availability. Facilities for the production of the spindle have now been completed and the manufacturer is in a position to supply it in quantities for installation on both old and new frames.

The New Era spindle is a departure from conventional spindle design since the central shaft or blade is stationary, securely fastened to the spindle rail, held in a position central with the ring by means of a simple anchorage which serves as a means of dampening out any vibration and also functions as a device which makes "plumbing" a simple and easily accomplished operation.

The distinguishing feature claimed for the spindle is the support of the load between two bearings which not only effects an improvement in the running characteristics, but makes it possible to plumb this spindle while it is motionless. Another feature of the spindle is the fact that the yarn carrier is a tube.

In addition to the definite power saving, all the time, labor, and oil involved in a conventional spindle lubricating routine is saved and, since no oil is required for the spindles, the spindle rail is always

PLAY SAFE
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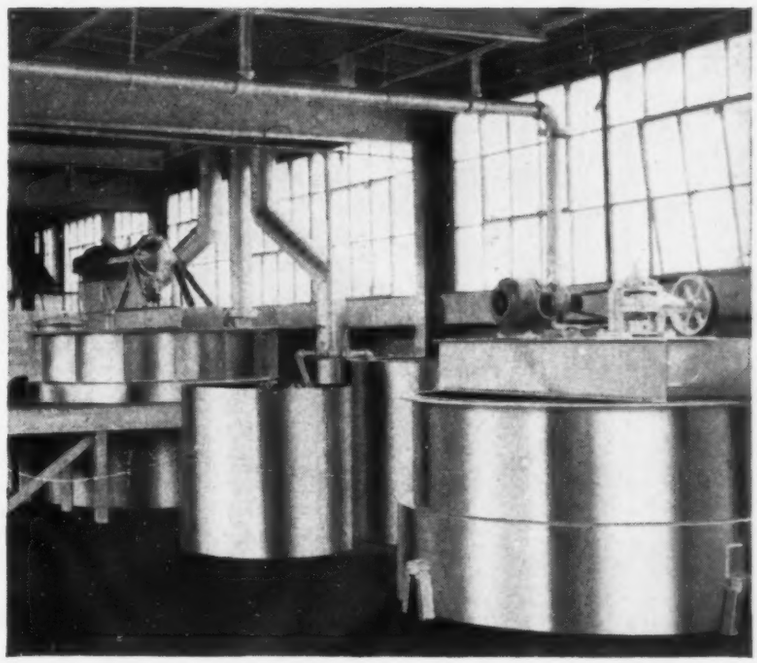
Stainless Steel



BEING NON-CORROSIVE, *Stainless Steel* tanks and vats will permit colors to run true in successive runs, and allow the use of almost any dye or chemical by remaining unaffected through metallic contamination. Let *Stainless Steel's* strength, lower repair costs and longer life repay the initial costs and reduce the costly maintenance overhead.

***Truitt's engineering service* in the fabrication of carbon and stainless steel is available to the textile, chemical, pulp and other industries without charge. Whether your need be tanks, vats or other equipment, remember . . . *Truitt, one of the South's largest fabricators*, will gladly figure your job, without cost or obligation.**

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Whether it is liquidating an entire mill . . . or helping a frantic operator get a thousand bobbins quick, Comer handles each transaction with the same infinite care that has characterized two generations of helping mill owners in textile centers around the world.

Saving operators thousands of dollars by supplying needed machinery to supplement or replace present equipment—and *then* turning around and finding a buyer for the machinery being replaced, requires a lot of contacts. Comer *has* the contacts. Whatever your need, wherever you are—

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clean; there is no oil stain on the yarn, and no wasted oil to affect the life of the tapes, according to the manufacturer.

The spindle is available in two types: the rubber-mounted type and the oil-cushion type, the latter being developed for those mills which do not desire to use the spindle with the plumbing device.

Sleeves are designed to take fiber or wooden bobbins. At the present time the spindles are available in 5 sizes: Nos. 2, 3, 5, 6, and 6 special.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

For additional data, request item C-104, using business reply card on page 222.

Dynatherm Resistance Bulb

The Dynatherm resistance bulb is a standard product which is suitable for any installation for operating temperatures below 600°F. It can be easily installed to replace any thermocouple or filled-system bulb, in a well of ¼" diameter or more and of any depth or any material, according to the manufacturer.

This adaptability results from the fact that heat transfer to the sensitive portion of the bulb is through its tip. The bulb is therefore easily brought into actual contact with the well by pushing the bulb against the end of the well. This feature contributes to precise and rapid temperature measurement, it is claimed.

The bulb has the mechanical convenience of the thermocouple, but with the added advantages of greater stability, elimination of cold junction error, small size, faster response, and comparable cost.

The Foxboro Company, Foxboro, Mass.

For additional data, request item C-161, using business reply card on page 222.

New Series of Take-Up Units

A new series of take-up units especially adaptable for conveyor construction, shaft adjustment and belt tightening devices, is designated Type LTU. In shaft sizes ranging from ¾ inch to 2 7/16 inches, these units incorporate pre-lubricated, self-aligning wide inner ring ball bearings with exclusive self-locking collars and frictionless Mechani-Seals.

Mechani-Seal construction provides

'ROUND THE WORLD WITH ARIDYE PIGMENT COLORS

HOW THIS PATTERN WAS PRINTED IN *India*

Indian Art Textile Mill, a well-known textile printer in Bombay, India, utilizes Aridye® Pigment Colors for printing a variety of cotton fabrics. The pattern illustrated is typical of those employed for cotton saris.

The formulas used by Indian Art for this particular color combination were as follows: Blue—Aridye Blue FC2G cut 1:15 with Aridye Clear 6214; Green—5 parts Aridye Green FJB and 1 part Aridye Yellow FY2G cut 1:15 with Aridye Clear 6214. The fabric was roller printed in the usual manner, dried and heat treated to provide maximum fastness to washing. No aging, soaping, washing or other aftertreatment was necessary.

Because of their ease of application and numerous other advantages, Aridye Pigment Colors are being used increasingly by progressive textile printers 'round the world. An Interchemical technical representative will be glad to discuss the many ways in which they will be of benefit to *you*. For full details, write to Interchemical Corporation, Textile Colors Division—Pioneers in Pigment Colors for Textiles—Box 357, Fair Lawn, N. J.

CHECK THESE EIGHT ADVANTAGES

Sharpness of Mark • Exceptional Fastness to Sunlight
Uniformity of Shade • Fastness to Washing • Bright Colors
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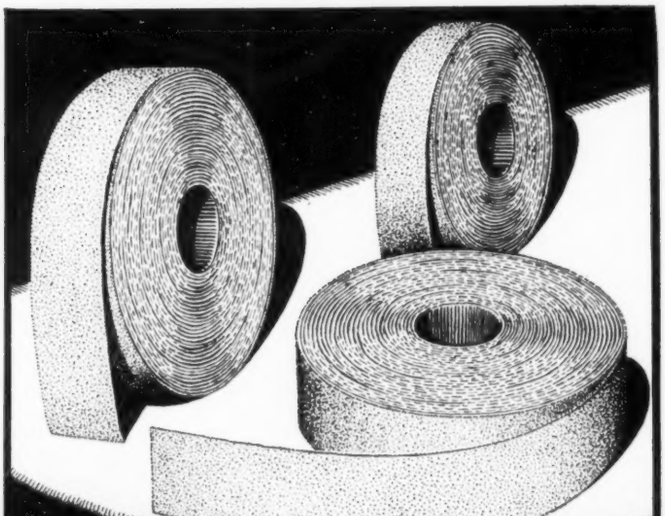
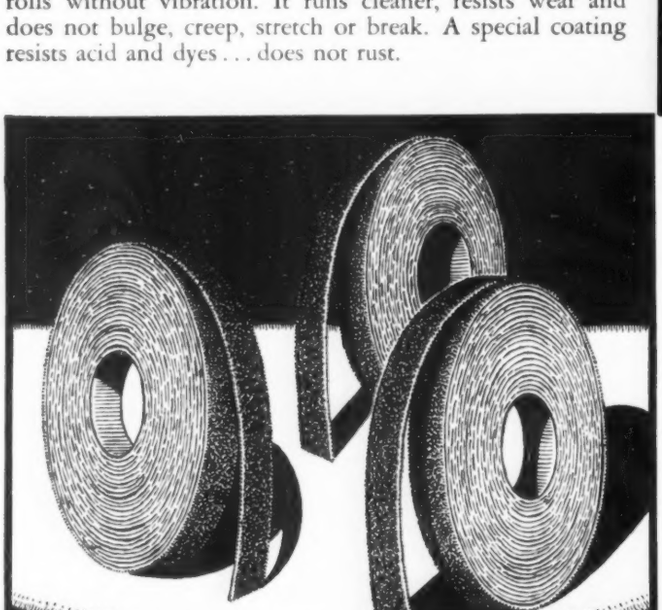
Sales Representative for India: Modern Products, Ltd., Churchgate House, Churchgate Street, Bombay

TEXALOX
Roll Covering
by CARBORUNDUM
TRADE MARK

The uniform grain surface of TEXALOX roll covering grips material with gentle firmness, draws it evenly through the rolls without vibration. It runs cleaner, resists wear and does not bulge, creep, stretch or break. A special coating resists acid and dyes . . . does not rust.





Fillet Cloth
by CARBORUNDUM
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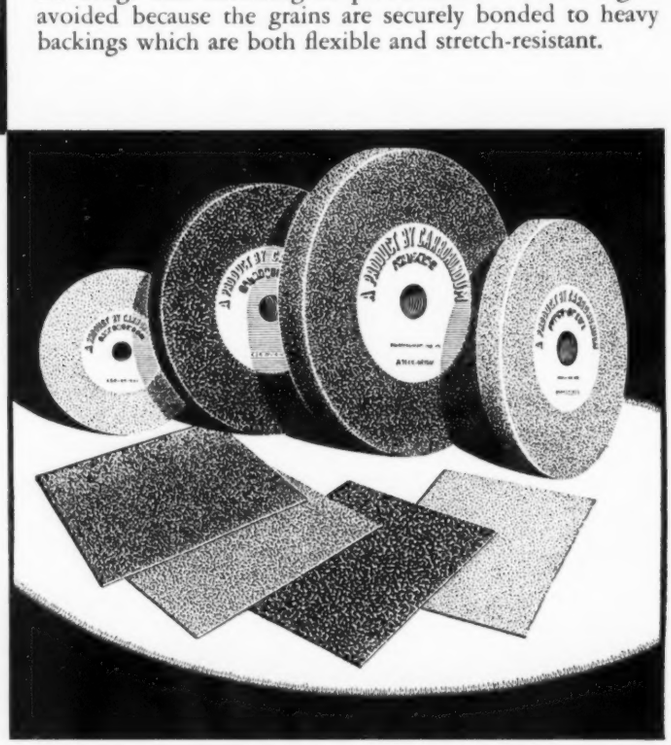
Both the volume and quality of slivers are improved by card clothing wires that are kept clean and sharp. Fast-cutting fillet cloth by CARBORUNDUM restores card clothing wires quickly and cleanly. No ganging. No bending. No hooking. The shedding of particles into the roving is avoided because the grains are securely bonded to heavy backings which are both flexible and stretch-resistant.



Abrasives
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For production, maintenance or tool room use, the right abrasive for the job is provided in a variety of grades, shapes and sizes of products by CARBORUNDUM. In specifying bonded or coated abrasives, it's an accepted practice to call in CARBORUNDUM. The Carborundum Company, Niagara Falls, N. Y.

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company

the effective sealing operation of an unusually long labyrinth plus that of an external slinger. An inner steel plate shield attached to the bearing's outer ring retains lubricant, while a rotary slinger attached to the bearing's inner ring throws off contaminants.

The Fafnir Bearing Company, New Britain, Conn.

For additional data, request item C-111, using business reply card on page 222.

Unit Heater Features Unique Heating Coil

A line of unit heaters for steam or hot water, featuring a heating coil which is described as revolutionary in design and efficiency, has been announced.

The line is streamlined in style and light in weight, without reducing the durability needed for heavy-duty industrial applications. Operational noise has been reduced to a minimum, and even the largest units are reported to be in the same sound range as the ordinary household electric fan.

The outstanding feature claimed is the heating coil which boosts efficiency and at the same time cuts operating costs. It is constructed of one-row Aerofin coils of continuous U-bend copper tubing brazed into steel headers. Deeper and wider fin spacing minimizes resistance to air flow and facilitates cleaning. The deep fins give better heat transfer, according to the manufacturer.

The light weight, simple design makes the suspended unit easy to install. Service is even simpler. The coil can be completely cleaned in a matter of a few minutes. The whole unit can be disassembled by the removal of only four bolts and four screws.

Carrier Corporation, Syracuse, N. Y.

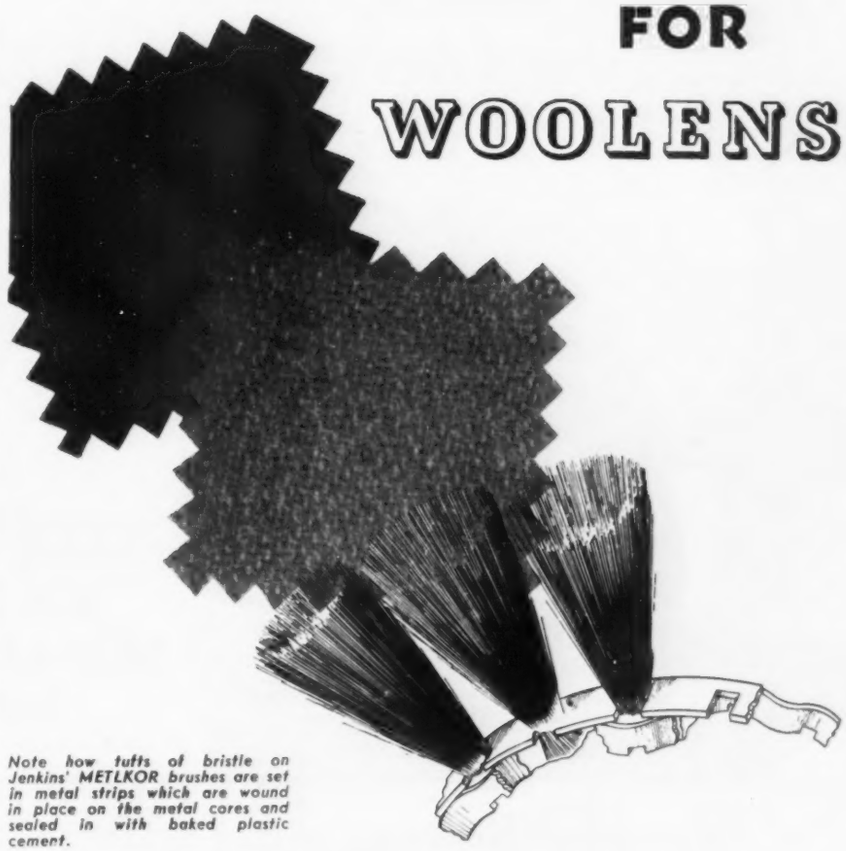
For additional data, request item C-110, using business reply card on page 222.

Short Stroke Dancer Roll Provides Constant Tension Control

An electronic device, known as the "Reliance VSS Short-Stroke Dancer Roll," is designed to meet two distinct speed control problems commonly associated with various types of continuous industrial process operations.

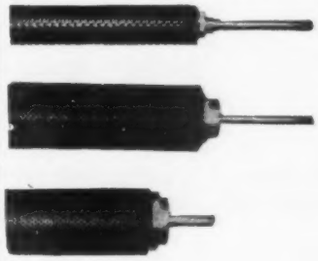
First, it is specifically designed as a constant tension control for loops of material in process. The reactor of the VSS is mechanically linked to a

JENKINS'
METLKOR BRUSHES FOR WOOLENS



Note how tufts of bristle on Jenkins' METLKOR brushes are set in metal strips which are wound in place on the metal cores and sealed in with baked plastic cement.

METLKOR cylinder brushes, have metal cores; cannot warp, sag, split, or get out of alignment. Easy to clean, because there are no places for dirt or dust to lodge. Not affected by acids or alkalis that may be used in processing. Jenkins' METLKOR brushes give 3 to 5 times the active life of cheaper brushes.



Another important feature of METLKOR brushes is that they can be refilled when worn. METLKORS can be bristled with any material including nylon.

USED BY EFFICIENT MILLS FOR—

Flock, raising, laying carding, combing, singeing, pressing, scouring, teasel cleaning, teaseling, wet brushing, polishing, and steam brushing.

INDUSTRIAL Brushes

Types and sizes for every use in textile processing.

Write today for illustrated catalog showing the complete line of Jenkins' brushes for the textile industry.

M. W. JENKINS' SONS, INC.
Manufacturers of Industrial Brushes Since 1877
CEDAR GROVE, ESSEX COUNTY, NEW JERSEY

"I don't worry over credit and collections. Factoring does it for me"

Your credit and collection worries are completely eliminated when you use Trust Company of Georgia Factoring Service.

You can pay the cost of factoring with the savings you make on credit and bookkeeping expenses.

OUR BUSINESS IS HELPING YOURS

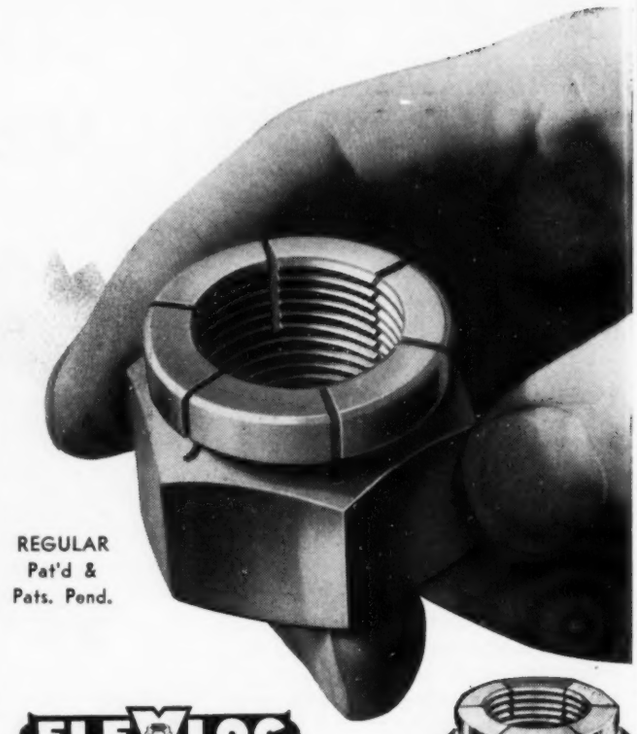
Let us show you the many other advantages low-cost factoring provides.

FACTORING DIVISION

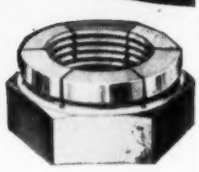
TRUST COMPANY OF GEORGIA

ATLANTA, GEORGIA

NEXT DOOR TO EVERY MILL IN THE SOUTH



REGULAR
Pat'd &
Pats. Pend.



THIN

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

. . . WON'T SHAKE LOOSE

. . . REDUCE MAINTENANCE

Invariably, when nuts loosen, they cause shutdowns, loss of production, and bad tempers all around. All this can readily be eliminated by installing the one-piece, self-locking "FLEXLOC", because *it positively will not shake loose* and positively cuts cost of maintenance.

The all-metal, one-piece resilient "FLEXLOC" is becoming increasingly popular, because it is processed to have an exceptionally uniform torque and, because it packs a stop, lock and plain nut all in one. "FLEXLOC" accommodates itself to a wide range of thread tolerances and can be used over and over again without losing much of its torque. And, being a stop nut, it stays locked in any position on a threaded member. It is not affected by temperatures commonly met.

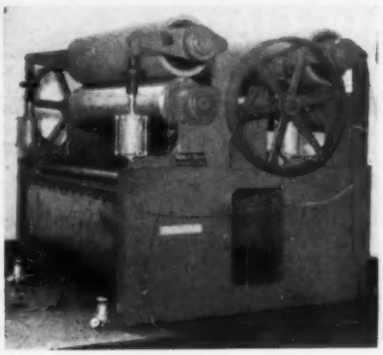
Available in "thin" and "regular" types —in sizes from No. 6 to 2" in diameter— in NC and NF thread series. Write for your copy of the "FLEXLOC" Catalog.

OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNSYLVANIA, BOX 582

CHICAGO • DETROIT • ST. LOUIS • SAN FRANCISCO



NEW TWIN MANGLE

A twin mangle combines the water mangle and the starch mangle as one unit. The machine is ball bearing and each nip has a bottom brass roll and a top rubber roll.

Pressure is applied by air cylinders, and units are fitted in each piston rod. Each unit in the piston rods is connected with a gauge so that it may be checked to insure that the same pressure is attained at each end of the top squeeze rolls. With this system it is always possible to reproduce the exact pressure desired on any type or style cloth.

When it is desired to have a greater pressure on one side than on the other, this may readily be done by means of the valves.

Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

For additional data, request item C-107, using business reply card on page 222.

dancer roll supported by the web of material being processed by two sections of the machine. Any change in the speed relationship of the section drives will move the loop of material causing the reactor plunger arm to move. Therefore, the VSS output changes so as to slow down or speed up one of the sections to restore the proper speed and tension relationship.

As a second application, the VSS can be used as a speed setting device. Here the VSS may be employed to control a motor speed in proportion to the position of some object or mechanism.

Reliance Electric & Engineering Co., 1076 Ivanhoe Rd., Cleveland 10, Ohio.

For additional data, request item C-119, using business reply card on page 222.

All-Aluminum Precipitron

Development of an all-aluminum model of the industrial Precipitron that can handle a 10 per cent greater volume of air than previous units of the same size has been announced.

There are 99 plates in the new model, compared to 111 in the old, but three inches additional length in each plate gives the new unit 17 per cent more dirt-trapping area. This extension in the direction of air flow gives the new Precipitron its ability to clean 10 per cent more air than previous models occupying the same space, according to the manufacturer.

The new Precipitron is built in two sizes; one 36 inches wide, the other 24 inches wide. The larger unit can clean 1,000 cubic feet of air a minute; the smaller one, 667 cubic feet. Installed in conjunction with ventilation systems, the cells are stacked in tiers according to buildings' air cleaning needs.

The 36-inch aluminum cell weighs 50 pounds. This lighter weight, combined with improvements in the frame and body construction, makes the unit easier and cheaper to install. Simplifying and revamping the layout of the plates and dust-charging section will make possible substantial savings in the cost of flushing the collected dust from the plates.

Sturtevant Division, Westinghouse Electric Corp., Boston, Mass.

For additional data, request item C-118, using business reply card on page 222.

Hydraulic Institute Standards

The eighth edition of *Standards of Hydraulic Institute* has been published by Hydraulic Institute, 90 West Street, New York 6, N. Y. ($3.00).

Products, materials, processes or procedures are defined with reference to one or more of the following: Nomenclature, composition, construction, dimensions, tolerances, safety, operating characteristics, performance, quality, rating, testing, and service for which designed.

MILTON
A TIME TESTED LINE
Engineered for Production
MILTON WARP BEAMS
for BROAD, NARROW FABRIC, RIBBON, VELVET, CARPET LOOMS

BROADLOOM BEAMS

For C & K Looms (pictured) and Draper Looms (with let-off gear). Steel barrels, cast iron flanges.

RIBBON LOOM BEAMS

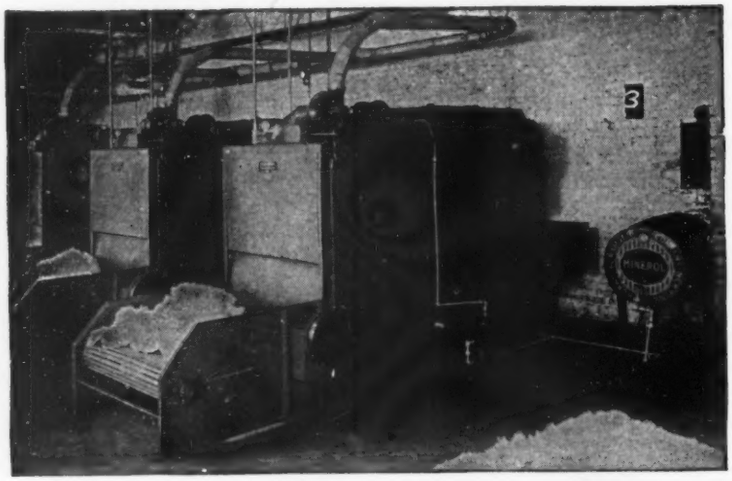
Steel barrels, with your choice of adjustable head and fixed shaft (pictured) or fixed head with removable shaft.

GET THE COMPLETE STORY

Write for Catalog 45 (Steel) or Catalog 45-A (Light Metal)

MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON, PENNA.

MINEROL FIRST and FOREMOST CONDITIONING AGENT for Textile Fibres.



● **MINEROL** is a prepared agent for conditioning textile fibres..a systematic Process of Spraying Natural and Dyed Raw Stock. • **MINEROL** helps to separate long fibres from the short. It saves *good fibres* and prevents waste. It makes fibres more supple..more pliable.• **MINEROL** provides *control* of conditions caused by static electricity. It protects the cards and preserves the wire. • **MINEROL** prevents Dust and Fly..safeguarding health and insuring better working conditions.• **MINEROL**..as a conditioner is more urgently in demand thru the increased use of staple Cut Rayon and its varied combinations with cotton, wool and other fibres.

BRETON MINEROL PROCESS PATENTED

BORNE SCRYMSER COMPANY

Originators of the BRETON MINEROL PROCESS for CONDITIONING FIBRE

ELIZABETH, N. J. *75th Anniversary* CHARLOTTE, N. C.

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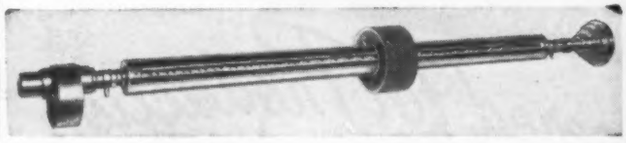
A. M. KNIGHT, West Yarmouth, Mass. W. M. DYNES, West Springfield, Mass. S. T. DOUGLAS, JR., Westwood, Mass.

SOUTHERN REPRESENTATIVES

W. E. SMITH, Charlotte, N. C. JOHN FERGUSON, LaGrange, Ga. CHARLES KELLEY, Charlotte, N. C.

NEW



Two Differentials in One

ROY 40SR. For those who prefer fast grinding.

ROY 40SRS. For those who prefer regular or slower grinding.

The motion case is the same, but the gears are interchangeable. A quick switch of gears and you have your required speed—fast or slow.

B. S. ROY & SON COMPANY

Established 1868

WORCESTER, MASS.

Representatives in the South

Charles E. Hendrick—L. P. Bell—B. L. Quick—who may be contacted at office and warehouse, 1623 North Tryon Street, Route 29, Charlotte, N. C.—Tel. 5-3845.

FISHER *FUNCTIONAL* TEXTILE TRUCKS

FOR EVERY MILL PURPOSE

Scientifically engineered for Roving, Filling, Doffing, Lap, Platform, Battery Filling, and other specific jobs. Warp beam trucks for manual or monorail handling. More rugged, and stronger at points of stress, Fisher Trucks are designed to avoid damage to machinery on contact. Aluminum, Stainless Steel, and Galvanized Steel. Styles made include Vulcanized Fibre with cured oak bands.

Oval End Steel Truck.

Inset shows inside and bottom construction, with vertical and horizontal spot-welded reinforcement.

Write now for illustrated brochure showing all styles.

Representatives:

J. W. Davis, 122 Dillingham St., Columbus, Ga.

Carolina Supply Co., 35 Court St., Greenville, S. C.

Shelton & Associates, P. O. Box 496, Greensboro, N. C.

FISHER MANUFACTURING CO.

MATERIALS HANDLING EQUIPMENT, TEXTILE

BOX 244 -- HARTWELL, GEORGIA

Materials Handling Conference

A HIGHLIGHT of the recent Materials Handling Show in Philadelphia, Pa., was a conference on materials handling conducted by the American Society of Mechanical Engineers. Featuring a number of industry's foremost authorities on the subject, the conference demonstrated the secure status of materials handling in America's business family.

Statements made by many of the conference speakers apply pertinently to the textile industry. They are herewith presented:

Curtis H. Barker, Jr., sales manager, Pallet Loader Division, Lamson Corp., Syracuse, N. Y.—"No more profitable cost reductions can be realized than in the field of materials handling."

Stevens H. Hammond, president, The Whiting Corp., Hammond, Ill. —"It is not unusual to justify an investment of $10,000 to $20,000 or even $25,000 for equipment which will replace a man on the payroll."

Fred Carpi, vice-president, traffic, The Pennsylvania Railroad Co. —"Any development which tends to reduce the handling cost of industry indirectly benefits the carriers."

Arthur A. Brainerd, illuminating engineer, Philadelphia Electric Company, Philadelphia, Pa.—"The most spectacular phase of the effectiveness of good illumination in materials handling is the increased economy of floor space."

D. O. Haynes, vice-president in charge of warehousing, Merchants Refrigerating Company, New York, N. Y.—"With elevators of ample capacities and strategically placed, and with proper aisle space provided in the initial plans, there is no doubt that handling in multistory warehouses can and will be made almost as efficient as these operations can be performed in single-story plants."

C. M. Harris, production manager, Electrolux Corp., Old Greenwich, Conn.—"By exercising great care in the selection of drivers of the powered materials handling equipment, three and one-half years of operation free of any accidents or injuries to any personnel has resulted."

T. O. English, assistant general purchasing agent, Aluminum Co. of America, Pittsburgh, Pa.—"Industry is waiting to be sold improved production methods. Management realizes more than ever that our future peacetime economy will not support the inefficiencies of the past."

Industrial Vision Programs

(*Continued from page* 102)

a benefit to management, on piece-work it is a direct financial gain for the employee. Plants using piece-work rates invariably find startling increases in output after employees' eyes have been corrected. In one hosiery mill, 83% of the knitting department showed an increase in earnings, 75% of the full-fashioned seaming department showed an increase, and the same was true of 64% of the employees in the looping department. The greatest single increase in earnings was by one employee whose take-home pay went up 41%, while the average increase for the whole full-fashioned seaming department was 16%.

At Fulton Bag & Cotton Mills there was found to be an average difference of 15c per hour between the earnings of operators with adequate and those with substandard vision.

There are many other obvious employee benefits resulting from good vision. Health in general may be improved. Many headaches are a direct result of poor and tired eyes. Furthermore, there are innumerable instances in which employees have been held to low rating jobs when, except for poor vision, they might have been promoted to more responsible and better paying positions.

It seems true that both employers and employees benefit directly from a vision program. Good vision will lessen the headaches of management as well as those unnecessarily suffered by their employees.

an actual case from our files

PAINTED 12 YEARS AGO

. . . STILL BRIGHT TODAY!

A typical mill owner recently reported that the walls of his plant are still bright and in good condition — although they were last painted 12 years ago! The paint used was Carmolight Mill White — positive durable seal against humidity, fungi, fumes and other causes of deterioration. Available in four finishes. Contact your regional representative or write to Carpenter-Morton Company, Dept. R., Everett, Mass.

CARPENTER-MORTON COMPANY

BOSTON NEWARK DETROIT
CHARLOTTE CHICAGO BUFFALO

PRECISION

KENTEX Aprons

Painstaking care safeguards the *absolute uniformity* of Kentex Aprons. Careful, individual checks are made throughout the stripping, cutting and sealing processes to be certain that they are absolutely uniform in thickness, width, length and circumference. That's why we can *guarantee* you a sure fit with Kentex!

If you haven't yet used Kentex Aprons, you can try them without cost on your frames. Just send us your specifications and we'll be glad to send free samples and quote you prices.

TEXTILE APRON COMPANY

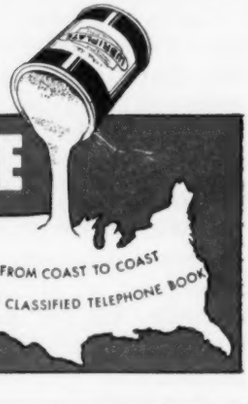
EAST POINT, GEORGIA

J. B. KENNINGTON, OWNER

EFFECTIVE LUBRICATION *in spite of* moisture

Operation of production machinery in the presence of moisture, steam and acids has always been a serious problem in many processing industries. There are a number of **LUBRIPLATE** Lubricants that satisfactorily meet these unfavorable operating conditions, thereby protecting machine parts against rust and corrosion.

Write for a copy of "The LUBRIPLATE FILM" written especially for your industry.



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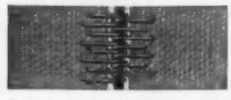
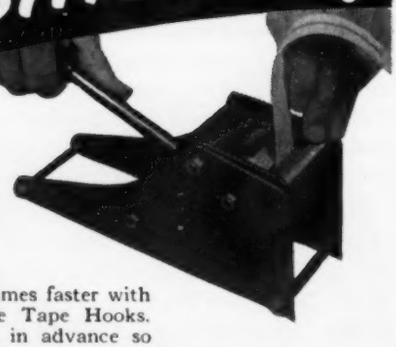
10 TIMES FASTER THAN STITCHING!

SPINDLE TAPE LACING EQUIPMENT

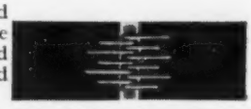




Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

PERSONAL NOTES

ABOUT MEN YOU KNOW

Samuel L. Rambo has retired as senior salesman in the Columbia and Minerva hand-knitting yarn division of James Lees and Sons Co., Bridgeport, Pa. Mr. Rambo, whose services extended over 35 years, has been succeeded by **Burk G. Allerton,** transferred from New York City. **Harvey Waldman** has been moved from Memphis, Tenn., to New York, and will be replaced in Memphis by **August Jandorek.**

The William Carter Co., Needham Heights, Mass., has announced the following appointments: **Lawrence A. Poletti** succeeds **Ernest J. Poletti,** retired after 39 years of service, as divisional sales manager of the New York district. **Don MacKeracher,** former assistant to the general sales manager in Needham Heights, is the new assistant manager. **William E. Stumvoll** has become divisional sales manager in Cleveland, Ohio. **W. M. McCutcheon** is being transferred from the New York office to be a sales representative in the Cleveland area. Mr. McCutcheon takes over the duties of the late **Merle Misener.**

John W. May, former chief engineer of Wright's Automatic Machine Co., Durham, N. C., has become chief mechanical engineer for the Deering Milliken Research Trust of Greenwich and Stamford, Conn.

David Jennings, a director of J. P. Stevens & Co., Inc., has retired.

Charles M. Epstein, Jr., has been elected vice-president and **John D. Sicher** secretary of the Liberty Throwing Co., New York.

Richard L. Moyle, vice-president of The Kendall Co., has retired after 56 years service in the textile industry.

John F. Greene, former general superintendent of Bates Mfg. Co., has joined Wamsutta Mills, New Bedford, Mass., in an executive capacity.

Emmett J. Driscoll, formerly on the executive staff and department head of Turner-Halsey Co., has become representative of the U. S. Finishing Co. in the New York market.

Robert B. Blum has succeeded **Herman Blum** as president of Craftex Mills, Inc., of Pennsylvania. Herman Blum has been elected chairman of the board.

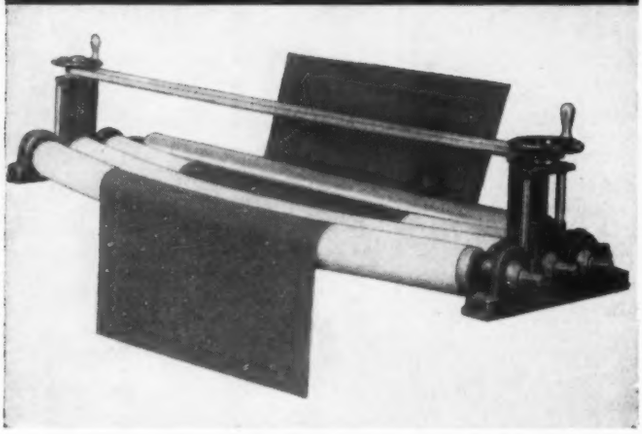
Joseph L. Wright, former superin-

C. W. Sims, left, is shown here receiving his pension certificate, having reached the retirement age of 65 after 23 years of service with the U. S. Rubber Co.'s Stark Mills in Hogansville, Ga. Making the award is A. C. Link, plant manager

Manufactured and Serviced by
STODGHILL and COMPANY
ATLANTA GEORGIA

"The Size That Satisfies"
SUPERTAL

Mount Hope ADJUSTABLE EXPANDER



You Can CONTROL the Widthwise Stretch of your Cloth with this Device

This expander mounting provides a quick and easy means of adjusting the amount of widthwise stretch in your cloth from maximum to minimum. Essential on machines handling more than one grade of goods with different stretching requirements.

Shown herewith are 3 "Free-Wheeling" Expanders and 1 four inch diameter brass lead-on roll, all mounted in the same bracket—the middle expander being vertically adjustable by means of hand wheels. Additional adjustment is also possible by rotating the expander axles in ball and socket brackets. If still greater range of adjustment is required, the unit can be furnished with 5 expanders, 2 of which are vertically adjustable.

The hand wheels for vertical adjustment are connected by a roller chain enclosed in tubes, welded to the frame, to protect the chain from damage and prevent soilage of cloth.

When various grades of cloth, both easy and hard to stretch, are frequently handled, this type of expander mounting is very useful.

Bulletin E.C. on request

MOUNT HOPE MACHINERY CO.
42 Adams St., Taunton, Mass., U. S. A.

REPRESENTATIVES: Parkman Collins Company, Boston—for Maine; Ingalls Engineering Company, Providence — for N. H., Mass., R. I., and Conn.; John H. Andresen, Inc., Paterson — for Southern N. Y.; N. J., and Pa.; Slaughter Machinery Co., Charlotte — for the South; S. S. Wilson, 1737 Howard St., Chicago — for Mid-West; Sidney Springer, Los Angeles — for California; W. J. Westaway, Limited, Hamilton and Montreal—for Canada.

FOR SPEED IN MATERIALS HANDLING

● Materials can be shifted from one department to another in a jiffy in these lightweight, easy rolling barrels on wheels. Built of Diamond Vulcanized Fibre, they are extremely tough and durably constructed. Smooth surfaces protect the most delicate materials while the fibre will not scuff or splinter in moving hard goods. Other Diamond Fibre Hollow Ware includes Boxes, Cans, Trucks, Baskets and Trays. For complete information on sizes, construction and special features, write for Catalog HW-44.

C-D DIAMOND FIBRE HOLLOW WARE
CONTINENTAL-DIAMOND FIBRE CO., NEWARK 11, DEL.

Keep your eyes on TAKK*

STATIC CONTROL • EQUIPMENT •

Completely Effective
Completely SAFE
LOW Maintenance Cost
LOW Operating Cost

Standard Engineered Installations for:

Looms	Roving Frames
Warpers	Spinning Frames
Slashers	Condensers
Cards	Boarding Machines
Draw Frames	Knitters

Other Textile Machines

Recommended by Leading Textile Consulting Engineers to their Clients.
Standard or Optional Equipment on New Textile Machinery
Recommended by Leading Synthetic Yarn Manufacturers to their Customers
Approved by Factory Mutual Insurance Laboratories for PERFORMANCE and SAFETY

●

Trained Sales Technicians at your Service Located in Atlanta, Greenville, Greensboro, Richmond, New York, Boston, Buffalo, Toronto.

FOR COMPLETE INFORMATION WRITE TO

THE TAKK CORP.

NEWARK, OHIO

*Trade Mark Reg. U. S. Pat. Off.

tendent of the Republic Cotton Mills, Plant No. 3, Great Falls, S. C., a division of J. P. Stevens & Co., Inc., has been made general superintendent of the American Yarn and Processing Co., Mount Holly, N. C.

Douglas Duncan McCord, formerly associated with Westley Mason's Silk Rayon Mills, near Three Rivers, Que-

Mr. McCord

bec, Can., has become assistant designer in the Lumite fabrics department of Chicopee Mfg. Corp.

Major J. T. Crawford has been appointed manager of Republic Cotton Mills, Great Falls, S. C. **Jesse A. White,** former manager of Cleveland Cloth Mills, Shelby, N. C., has become general manager of Republic, and **H. A. Rollins** is now general superintendent at Cleveland.

R. P. Alexander has been named general superintendent of the Slater (N. C.) Mfg. Co.

S. Jack Davis has been promoted from chief chemist of the Research Division of Callaway Mills Co., LaGrange, Ga., to assistant to the director of research. His responsibilities have been extended to include the testing department, technical library and the chemistry department.

W. E. Williams, formerly at the Birmingham plant of Avondale Mills, has been assigned as superintendent in Sylacauga, Ala.

Robert D. Reardon, formerly associated with Dan River Mills in a sales and manufacturing capacity, has been appointed merchandise manager of blankets and sheets in the Nashua (N. H.) Mills division of Textron, Inc.

Mrs. Louise Landress, formerly connected with the U. S. Department of Agriculture fiber testing laboratory at Clemson (S. C.) College, has joined Fieldcrest Mills, Spray, N. C., as head of the physical testing laboratory in the research and quality control department.

Joseph H. McFarland, vice-president in charge of carpet sales, has been elected a member of the board of directors for James Lees and Sons Co., Bridgeport, Pa. He replaces the late **A. T. Eastwick.**

Ferdinand K. Thun has been made president of Berkshire Knitting Mills succeeding his father, **Ferdinand Thun,** resigned because of ill health. Other officers elected are: **Dr. John E. Livingood,** vice-president and treasurer; **Hugo Hemmerich,** vice-president; **Edward J. Quinlan,** vice-president and New York sales manager; and **Mrs. Helen Janssen Wetzel,** secretary.

Sheldon VanVliet, formerly with Colonial Mills, has joined Greenwood (S. C.) Mills, Inc., and will be engaged in quality control of the company's line of spun and filament rayon fabrics.

David S. Cook, former president of Highland City Mills, Talladega, Ala., has been elected vice-president in charge of manufacturing for Clinton (S. C.) Cotton Mills and Lydia Cotton Mills.

Albert R. Jube has succeeded the late **Willis G. McCullough** as president of Collins & Aikman Corp., New York, N. Y.

Dr. Alfred T. Clifford, former senior chemist with the Interchemical Corp., Textile Colors Division, Fair

Dr. Clifford

Lawn, N. J., has joined the staff of Riegel Development Laboratories, Inc., Ware Shoals, S. C.

William A. Lang has retired as manager of the Edwards division of Bates Mfg. Co. in Augusta, Me. **Harold V. King,** former general manager of the company's Hill and York divisions, has assumed the duties vacated by Mr. Lang.

Charles K. Seid has tendered his

QUALITY RICHMOND PRODUCTS

NO. 11 OF A SERIES

ROSOFT

A NEW TYPE SOFTENER

USE IT

- On bleaches as it does not darken up to 300°F.
- On cottons and rayon knit goods.
- Directly in Dyebath.
- Along with Resin finishes for Nylon hosiery to prevent sticking to the boards.
- On spun Nylon to impart a good "hand".
- On spun Nylon along with Resins and Dullers to delustre.

DIRECTIONS

Dissolve in small quantity of *hot* water, *not steam.* Then add to cool bath.

(1) *For cottons*—from 1 to 3% on weight of goods.

(2) *In dyeing*—2 to 3% on weight of goods directly in dyebath.

(3) *With Resin finishes*—½% directly in finish bath.

(4) *For spun Nylon*—2 to 4% on weight of goods.

(5) *For delustering spun* Nylon—special directions.

Send Us Your SOFTENING PROBLEMS

ROSOFT

has so many and diverse uses we will be happy to consider how it can be used to help you.

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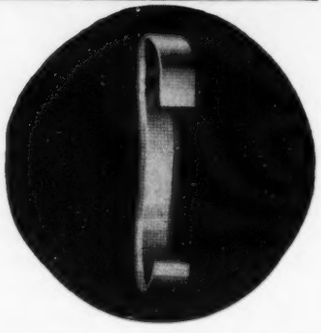

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H. R. FISHER—Concord, N. C.—Box 83—Phone 8366
C. W. SMITH, H. J. SMITH—Providence—Box 1187—Gaspee 0100

resignation as vice-president and general manager of Peerless Mills, New York and Pawtucket, R. I.

A. G. Ainsworth has taken over active management of the Gonzales (Tex.) Cotton Mills in addition to his regular responsibility as president, upon the resignation of **Basil Gibson. William Mercer,** former bookkeeper at Gonzales, is now purchasing agent.

Obituaries

Ralph R. Janes, 60, executive vice-president and manager of Roanoke (Va.) Mills, Inc., died while in a Roanoke hospital recently. Mr. Janes became superintendent of Josephine Mills, Cedartown, Ga., at the age of 18.

Laurence G. Meads, former president of Aridye Corporation and since 1946 president of the Murphy Paint Division of Interchemical Corp., passed away at the Roosevelt Hospital in New York City recently following a short illness.

John L. Foulke, chief research chemist of A. & M. Karagheusian, Inc., Gulistan carpet manufacturers, died suddenly last December at the age of 48.

John H. Draper, Sr., 65, vice-president and senior member of Draper Brothers Co., Canton, Mass., passed away recently in West Palm Beach, Fla.

Fay H. Martin, retired machinery designer and author of "The Roving Frame," died recently at the age of 87 in Bellows Falls, Vt.

Robert William Boys, 79, president-treasurer of Green River Mills, Inc., passed away at his residence in Tuxedo, N. C., last January.

William Edward Mahoney, president and treasurer of Premier Thread Co., Central Falls, R. I., and a director of the Thread Institute of America, died recently in Pawtucket, R. I., following a brief illness.

John Rosenfeld, 59, vice-president of Eskimo Knitting Mfg. Corp., died recently at his home in Philadelphia, Pa.

John R. Newton, 55-year-old president of Primrose Tapestry Co., Inc., Rome, Ga., died while in a Philadelphia, Pa., hospital recently.

T. H. McGowan, Jr., 63, treasurer and a director of Wyandotte Worsted Co. passed away following several weeks' illness in a White Plains, N. Y., hospital.

John A. Eberly, distributor and manufacturer of hosiery needles and other textile supplies, a director of the Franklin (N. H.) Needle Co., New Jersey Stitching Machine Co. and other manufacturing and real estate companies, passed away recently at his home in Mohnton, Pa.

Woodbury K. Howe, former superintendent of Merrimack Mfg. Co., Lowell, Mass., died recently at his home in North Andover, Mass., at the age of 62.

Ludwig F. Reissman, 82, a founder of Reading (Pa.) Maid Hosiery Mills and Prospect Dye Works, passed away recently.

George Dickinson, former vice-president and a director of Pocasset Worsted Co., died recently at his home in Cranston, R. I., at the age of 79.

Chester C. Woodcock, 56, of Rochdale, Mass., president of Carleton Woolen Mills, Inc., died while in the Fairlawn Hospital recently.

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WHAT THE TEXTILE MILLS ARE DOING

Armstrong Mill of **Gastonia (N. C.) Combed Yarn Corp.,** has been renovated into a modern quality yarn manufacturing plant at an estimated expense of $400,000. The company has also invested more than $750,000 in modernizing the Dunn Mill; work has begun on a similar project for the Clara plant.

William Whitman Co., Inc., New York, has been conducting both technological and market research in the field of vinyl plastics, having announced its decision to expand into the plastics field. Whitman Plastics, Inc., a subsidiary in Lynn, Mass., is now in production.

Wellington Sears Co., New York, selling agents for the West Point (Ga.) Mfg. Co., has made known the addition of a new department to handle the sales and engineering of "Lantuck," a new type of bonded fabric. Lantuck is being produced at the West Point company's new mill unit in Fairfax, Ala. Bonded fabrics, sometimes called non-woven fabrics because no spinning or weaving processes are required, are generally made by treating a web of fibers with a bonding substance to form a fibrous mat or sheet.

Athens (Ga.) Mfg. Co., spun rayon blends, tire cord, sheetings, etc., is arranging for a conversion from tire cord production to the manufacture of rayon dress fabrics in part of one of the mills. Looms and auxiliary equipment will be installed in the new division.

Thomaston (Ga.) Mills, Inc., knitting yarns, damask, upholstery fabrics, has completed plans for a one-story addition to be used for extensions in the bleachery.

James Lees & Sons Co., Bridgeport, Pa., woolen and worsted yarns for weaving and knitting, has arranged contract for the erection of a one-story building near Chicago, Ill., to be used as a factory branch, storage and distribution plant. Complete mechanical-handling facilities will be installed. The cost is estimated at about $300,000.

Libertyville (Ill.) Textiles, cotton

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In Waterous pumps are rigid bearings, spring loaded seals and inverted rotor hub. All bearings and timing gears run in oil to assure continuous lubrication of the pump without contamination of the size and the pump lubrication.

Shaft leakage and shaft friction are reduced to a minimum by the pumps being equipped with spring loaded seals. Waterous pumps have positive volume control, self-priming and constant delivery, without agitation within the pumps.

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rugs and fabrics, has completed the construction of a one-story mill at Grays Lake, Ill., which replaces one recently destroyed by fire. The project represents an investment of about $350,000, with equipment.

Hayward Schuster Woolen Mills, Inc., East Douglas, Mass., woolen goods for men's and women's wear, has discontinued operations permanently at the branch mill in Millbury, Mass. Property and equipment have been offered at public auction. Production at the main mill at East Douglas has been suspended temporarily.

Hathaway Mfg. Co., New Bedford, Mass., cotton and rayon goods, has plans under way for a one-story addition, including certain improvements in the present mill.

Nashawena Mills, Inc., New Bedford, Mass., cotton fabrics, broadcloths, lawns, etc. has approved plans for the construction of a boiler house at the mill with the installation of two high-pressure boilers and auxiliary equipment.

Cerey Woolens, Inc., Pittsfield, Mass., has been chartered with a capital of $100,000, to manufacture woolen goods. Walter G. W. Josselyn, assistant treasurer of Berkshire Woolen Co., Inc., Pittsfield, is president and treasurer.

The Golding Decorative Fabrics Division, a recently organized unit of Golding Bros. Co., New York, N. Y., has concluded arrangements for the purchase of a mill at Paterson, N. J., including equipment for Jacquard weaving. It will be operated as a main plant for the production of drapery and upholstery fabrics, and known as **Golbro Mills, Inc.** J. W. Barrett will manage the mill.

Southern Textile Printing Co. has been organized with a capital of $30,000, to operate a mill in the vicinity of Charlotte, N. C., for dyeing, printing and finishing. The principal incorporators are James McMillan and John Johnston, both of Charlotte.

Henrietta Mills, Inc., sheetings and print cloths, will carry out a modernization and improvement program at the mill in Caroleen, N. C. Considerable new machinery and facilities will be installed to replace obsolete equipment and provide for increased capacity. The cost is reported to be close to $2,400,000.

Barbet Mills, Inc., yarns and knitted cloth, is arranging for the removal of its executive offices from Gastonia, N. C., to Lexington, N. C.

Dennis Mills, Inc., has been chartered with a capital of $200,000 to take over and operate the former Global Mills, North Lumberton, N. C. The company will specialize in the manufacture of cotton yarns. M. S. Dyan and Henry Kass are the principal incorporators.

W. J. Armfield, formerly associated with Burlington Mills Corp., Greensboro, N. C., has plans for the construction and operation of a mill at Ramseur, N. C., to be equipped for the manufacture of worsted goods.

Columbia Narrow Fabric Co., Inc., has been chartered under Delaware laws with a capital of $1,000,000, to take over and succeed to a company of the same name with a mill at Shannock, R. I. It will specialize in the production of elastic and non-elastic webbing.

American Bemberg Corp., rayon products, has asked bids for the construction of new additions to the mill in Elizabethton, Tenn., for extensions in the yarn and fabric divisions, and installation of a continuous production process. This is part of an expansion program to be carried out during 1949, the entire project reported to cost approximately $2,500,000. The power plant will be enlarged and additional equipment installed.

Hartwell (Ga.) Mills, Inc., cotton sheetings, has plans for the construction of a one-story addition to the mill which will approximately double the size of the present plant. Equipment installation will include an air-conditioning system, and the existing building will be modernized and similarly equipped with air-conditioning facilities. The cost is estimated as close to $1,500,000, including machinery and improvements in the present mill.

Matthews (Ind.) Woolen Corp., recently organized to manufacture woolen fabrics, has concluded arrangements for the purchase of a building formerly owned by H. J. Heinz Co. The structure will be improved and equipped for a new mill, and machinery and facilities installed. Paul A. Bohn is the executive vice-president and general manager.

The recently organized **Machias (Me.) Mfg. Co., Inc.,** has work nearing completion on a mill to be equipped for weaving rayon fabrics. Machinery and facilities will be provided to give employment to over 100 persons. The plant will repre-

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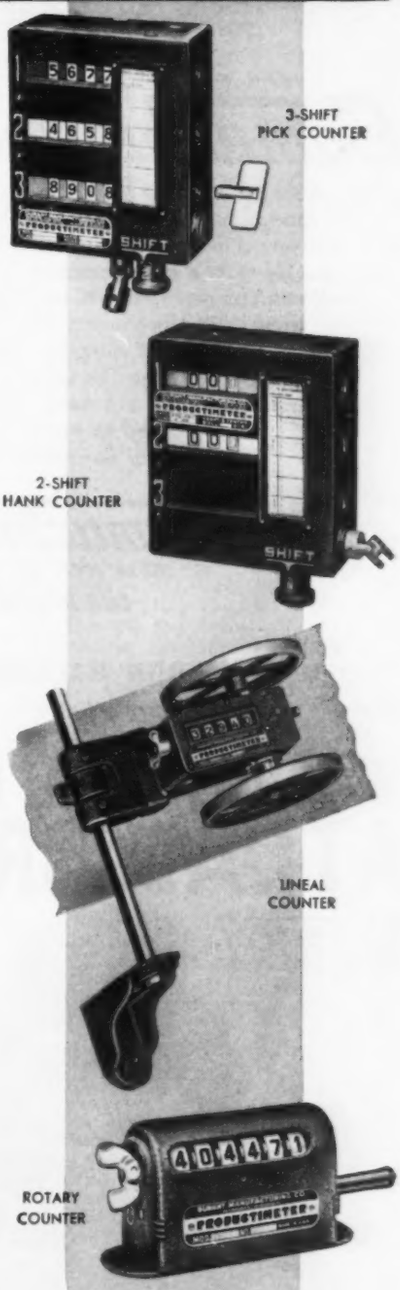

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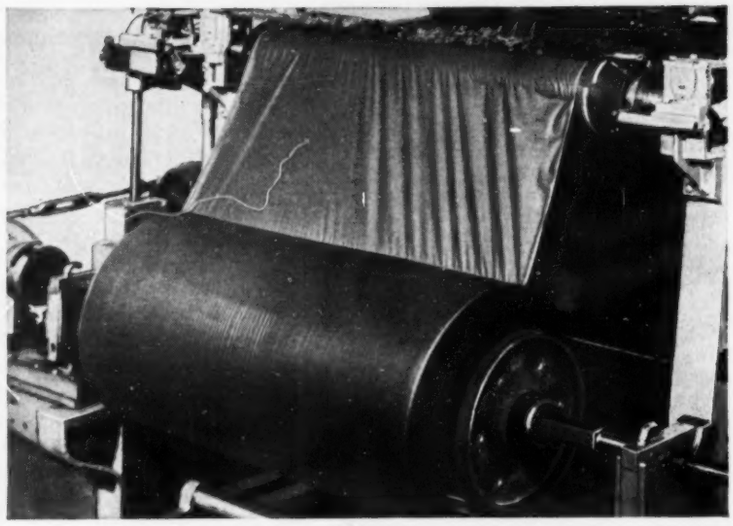

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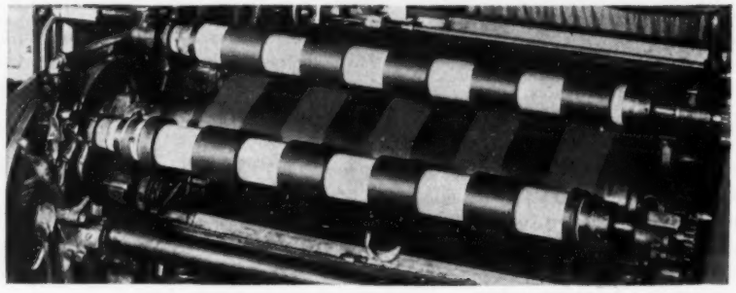

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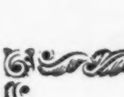

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3-3. Chlorine Safety Wall Chart. This wall chart is intended to emphasize some of the safety precautions which should be observed in handling and using chlorine. Hooker Electrochemical Co., Niagara Falls, N. Y.

3-4. Stonhard Resurfacer. Informative folder which shows how to speed up traffic, increase efficiency, reduce accidents and lower maintenance costs by patching or resurfacing splintered wood or rutted concrete floors with this resurfacer. Stonhard Company, 1306 Spring Garden St., Philadelphia 23, Pa.

3-5. Industrial Bearings. Catalog No. 490, 84 pages in length, is this manufacturer's new 1949 catalog. Full descriptions and specifications given on each item. A new feature this year is the Self-aligning Bearing. Johnson Bronze Company, New Castle, Pa.

3-6. Supertherm Heating System. High pressure hot water heating systems can easily be adapted to cotton, wool, and rayon mills; read how it's done. J. O. Ross Engineering Corp., 350 Madison Ave., New York 17, N. Y.

3-7. Industrial Thermometer. Exceptionally interesting and informative is a new bulletin on the Dillon stainless steel thermometer which is adaptable to practically every industrial use. W. C. Dillon & Co., Inc., 5410 West Harrison Street, Chicago, 44, Ill.

3-8. Wool Scouring. Onyx Technical Report No. 19-T describes the chemical and physical characteristics of Onyxol 9162, together with its other textile applications. Onyx Oil & Chemical Co., Jersey City 2, N. J.

3-9. Air Conditioning Units. For commercial and industrial applications, these units are especially designed for installation remote from space to be conditioned and fans are designed to handle external ductwork. Worthington Pump & Machinery Corp., Harrison, N. J.

3-10. Roller Chains and Sprockets. Data Book 1957-A, containing 200 pages, lists specifications, applications, prices, etc., on the manufacturer's line of power transmission chains and sprockets, conveyor chains and sprockets, special chains and other products. Link-Belt Company, 307 North Michigan Ave., Chicago, Ill.

3-11. Load Center Unit Substations. How Allis-Chalmers new standardized load center unit substations pay off in power savings, better performance, greater safety and flexibility, easier installation, and quicker delivery. Allis-Chalmers Mfg. Co., So. 70th St., Milwaukee, Wisconsin.

3-12. Multi-V Belts. This new section pictures and describes construction of the Multi-V belts, including the Grommet V-belt and gives belt numbers, sizes and pitch lengths. The B. F. Goodrich Co., Akron, Ohio.

3-13. Loom Accessories. The purpose of this catalog is to acquaint the reader with the entire line of manufactures and stocks handled by this company. Schmidt Manufacturing Co., 280 North St., New Bedford, Mass.

3-14. Filt-R-Stil Demineralizers. Revised edition tells how the reader can deliver low cost chemical equivalent of distilled water. Describes briefly the chemical and mechanical principles of demineralization by ion exchange. American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

3-15. Overcome Salt Corrosion. The booklet contains a minimum of ancient history. Its contents are about equally divided between a discussion of corrosion problems solved by the salt industry, and equipment for handling brine solutions in the chemical and process industries. The International Nickel Company, Inc., 67 Wall St., New York 5, N. Y.

3-16. Heddles, Frames, and Reeds. Literature available on this manufacturer's complete line for cottons, woolens, and synthetics. Walker Manufacturing Company, Inc., Atlantic & Ruth Sts., Philadelphia 34, Pa.

3-17. Moccasin Bushings. Catalog available showing this manufacturer's line of cast bronze oil-distributing bushings, price list included. Also illustrated and described is the Moccasin principle of oil distribution. One section devoted to listing of Moccasin Standard cast bronze bushings and bearings. Moccasin Bushing Co., 2000 Chestnut St., Chattanooga, Tenn.

3-18. Rayon Spinning. A unique booket, "Butterworth Rayon Spinning," just released, describes the latest Butterworth 100 spindle type rayon pot spinning machine. Brief history of development of rayon spinning machinery is related in opening pages. The manufacturer's part in technical development in this field, etc., plus other important mechanical features of machine described. H. W. Butterworth & Sons Co., Philadelphia 25, Pa.

3-19. Fact Folder. Folder available containing information on this manufacturer's items for the apparel and textile industries. CRA Corp., 45 West 25th St., New York, N. Y.

GENERAL ECONOMIC, MANAGEMENT . . .

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10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES"—8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

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105. FLUORESCENT LIGHTING FIXTURES—Specification sheets describing in detail industrial lighting fixtures of particular interest to the textile industry. Full information given on construction, light curve, methods of hanging, etc.—SMITHCRAFT LIGHTING DIVISION, Chelsea 50, Mass.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

115. ATOMIZER HUMIDIFIER — Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

129. BAHNSON CENTRIFUGAL HUMIDIFIER—Bulletin 327 describes this completely self-contained industrial humidifier which requires only water feed and drain and electrical connection to install.—THE BAHNSON COMPANY, Winston-Salem, N. C.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

159. BAHNSON HUMIDUCT SYSTEM — Bulletin 330 describes this unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering, and dehumidifying in any desired combination. —THE BAHNSON CO., Winston-Salem, N. C.

160. INSTALLING MACHINERY WITHOUT LAG SCREWS OR BOLTS—Booklet describing use of UNISORB pads for anchoring all types of machinery. —THE FELTERS COMPANY, Boston, Mass.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs, as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describing All-Purpose Floor Machines.—THE SELIG COMPANY, Atlanta, Ga.

166. OAKITE PLANT MAINTENANCE DIGEST—A 16-page manual describing materials and methods for handling 54 recurring maintenance cleaning and related tasks in factories and mills.—OAKITE PRODUCTS, INC., New York 6, N. Y.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB — Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

172. VENTILATING FANS — Bullein 3339 gives facts on Buffalo Ventilating Fans. — BUFFALO FORGE CO., Buffalo, N. Y.

177. DUCTLESS AIR CONDITIONING — Recent bulletin describing same.—AMERICAN MOISTENING COMPANY, Providence, R. I.

179. TOLEDO SCALES — A condensed catalogue which illustrates and describes all of the principal types of weight control equipment used in the textile industry. — TOLEDO SCALE COMPANY, Toledo, Ohio.

180. TANK MAINTENANCE — Illustrated folder describing R. E. McLean's methods of cleaning and painting water tanks and stand pipes. — R. E. McLEAN, Gastonia, N. C.

181. AIR FILTRATION AND DUST CONTROL—24 pages on atmospheric control, including engineering data.—AMERICAN AIR FILTER CO., INC., 275 Central Avenue, Louisville 8, Ky.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

201. ROLLER CHAINS, ETC.—Catalogs RC-49 and V-135-46 supply practical information, advantages and complete specifications helpful in selecting the proper power transmission chain drive to meet the requirements of textile machinery.—WHITNEY CHAIN & MFG. CO., Hartford, Conn.

203. BELTING & RUBBER GOODS—A condensed catalog on bolting, V-belts, horse and other textile rubber goods is available.—RAYBESTOS-MANHATTAN, INC., Passaic, N. J.

211. JOHNSON BRONZE CATALOGUE NO. 460—Shows over 850 sizes of cast bronze bushings, 350 sizes of UNIVERSAL Bronze Bars and over 250 Electric Motor Bearings. — JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILE ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

216. LEATHER BOOKLET NO. 202 — Attractive book illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

231. V-BELT ENGINEERING DATA BOOK—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. — MANHATTAN RUBBER MANUFACTURING DIV. of Raybestos-Manhattan, Inc., Passaic, N. J.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pennsylvania.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

251. OILITE BEARINGS AND PARTS—Catalog B44 describes and illustrates Oilite bearings and parts for all industries. — AMPLEX DIVISION, Chrysler Corporation, Detroit 31, Mich.

263. NEEDLE ROLLER BEARING—Catalog Engineering and Application Data Edition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning, lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

269. LUBRICATION AND MAINTENANCE OF BALL AND ROLLER BEARINGS—Illustrated bulletin describing efficiencies and economies of NON-FLUID OIL for all types ball and roller bearings.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

270. MANHATTAN FLEXLASTICS — Illustrated booklet describing how flexlastics are used in the Manhattan and Condor line of belting and mechanical rubber goods.—MANHATTAN RUBBER DIVISION, Passaic, N. J.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletin describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

272. HOUGHTON LUBRICATION CHART — Attractive chart listing lubrication recommendations for all mill departments and various textile machines.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

276. SPEED CONTROL—Bulletin 20B6051G describes Texrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

277. PRECISION COMPOUND AND CHAIN DRIVE—Folder explaining more profitable operation of roving frames.—PRECISION GEAR AND MACHINE CO., Charlotte, N. C.

278. ROLLER BEARINGS—New 35-page Hyatt handbook, "Guide Lines," is a guide to the proper application of cylindrical roller bearings in machinery and equipment of all types.—HYATT BEARINGS DIV., General Motors Corp., Harrison, N. J.

279. OILITE BULLETIN—Discussion of uses of oil-cushioned, self-lubricating bearings in product design and maintenance is contained in this illustrated bulletin. A wide range of machine parts is offered.—AMPLEX DIV., CHRYSLER CORP., Detroit 31, Mich.

280. BALL BEARING PILLOW BLOCKS AND FLANGE CARTRIDGES—Folder LAK contains informative text on ball bearing pillow blocks and flange cartridges incorporating the Fafnir Wide Inner Ring Bearings suitable for new as well as replacement applications in textile machinery.—THE FAFNIR BEARING CO., New Britain, Conn.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

307. THERMOMETER AND PRESSURE GAUGES—Catalog 6705-R and 6706 give data on both circular and rectangular case pressure type thermometers for indicating, recording and controlling processing operations in textile industry.—BROWN INSTRUMENT COMPANY, Philadelphia, Pennsylvania.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips. — CRANE CO., Chicago, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-1705-1 giving details of features and benefits of moisture equipment control for slashers and textile application. — BARBER-COLMAN CO., Rockford, Ill.

315. CONTROL INSTRUMENTS FOR TEXTILE PROCESSES—32-page illustrated booklet describing controls for such processes as slashing, dyeing, bleaching, kier boiling, drying, air-conditioning, etc. —BROWN INSTRUMENT CO., Philadelphia, Penna.

316. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—E. F. PERKINS & SON, INC., Holyoke, Mass.

319. GUIDE TO CORRECT INSTRUMENT SELECTION—This completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 98170.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

320. OAKITE POWER PLANT DIGEST—A 20-page manual describing materials and methods for handling 71 cleaning, degreasing, descaling, derusting, paintstripping and related operations encountered in power plants.—OAKITE PRODUCTS, INC., New York 6, N. Y.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., New York, N. Y.

CARDING, SPINNING, WINDING . . .

401. LUMMUS DUSTLESS, STEEL, BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

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409. ROTO CONER—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones or knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

413. SONOCO PRODUCTS—A 66-page illustrated booklet giving description, specifications and charts of the many Sonoco products, including bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc.—SONOCO PRODUCTS CO., Hartsville, S. C.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of the ring traveler, the development of the spindle, and the invention of Rabath's Bolster type spindle are covered. — NATIONAL RING TRAVELER CO., Pawtucket, R. I.

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443. **COMPARATIVE YARN TABLE**—Chart giving woolen number (cut and run system), also cotton worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVELER CO., Providence, R. I.

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452. **DEVELOPMENT IN WARP SIZING**—Technical bulletin, describing the successful new development of applying a warp lubricant separately from and subsequent to sizing with starch and in the same operation. This patented process involves the use of a Warp Lubricator Unit and SLIX, a new one-piece liquid sizing material.—SOUTHERN SIZING CO., Atlanta, Ga.

WEAVING, SLASHING . . .

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514. **SLASHER HOODS** — Pamphlet, describing drip-proof slasher hoods for cotton or rayon slashers. Roof or sidewall exhaust.—WOLVERINE EQUIPMENT CO., Cambridge 42, Mass.

515. **TEXTILE COUNTERS**—Catalog No. 50 illustrating and describing complete line of Productimeter Loom Pick Counters; Hank Counters; Yardage, Electric and Predetermined Counters; Tachometers, etc. — DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

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DYEING, FINISHING, CLOTH ROOM . . .

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633. **PRINTING WITH ARIDYE PIGMENT COLORS**—Bulletin F-1 describes preparation and application of pigmented water-in-oil emulsions for printing cotton, rayon, and other fabrics.—INTERCHEMICAL CORPORATION, TEXTILE COLORS DIVISION, Fair Lawn, N. J.

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769. **TEXTILE CHEMICALS**—Buying guide and reference book giving facts about Amalgamated Products, the fabrics on which they give best results, their proper application, and their chemical composition.—AMALGAMATED CHEMICAL CORP., Philadelphia 34, Pa.

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771. **"STARCH STABILIZER"** — Folder on Vanesta, a product used for textile sizing and printing, discussing stabilization and the results obtained. —R. T. VANDERBILT CO., New York 17, N. Y.

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774. **ROYCE TEXTILE CHEMICALS**—This booklet briefly describes the leading Royce products for textile processing, printing dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

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803. **THE TUBE-TEX FOR TUBULAR KNIT GOODS**—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., Philadelphia, Pa.

805. **EDMOS KNITTING MACHINE**—Type RKM knitter is fully described and illustrated in this bulletin. It is claimed that this machine can produce up to four times as much as older type machines. — EDMOS PRODUCTS CORPORATION, Brooklyn, N. Y.

809. **TEXACO IN THE KNITTING INDUSTRY**—Folder on knitting mill lubrication.—THE TEXAS CO., New York, N. Y.

811. **CIRCULAR KNITTING MACHINES**—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Philadelphia 24, Pa.

813. **THE NEW REINER HIGH SPEED TRICOT MACHINE**—168" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance. — ROBERT REINER, INC., Weehawken, N. J.

816. **THE NEW REINER KAYLOOM**—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine. — ROBERT REINER, INC., Weehawken, N. J.

817. **AUTOMATIC SELECTIVE STRIPPING MACHINE**—Descriptive and illustrative folder, entitled "If It's Stripes, Consult Brinton," now available. Important mechanisms involved in this process are described.—H. BRINTON COMPANY, Philadelphia, Pennsylvania.

818. **MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION**—Catalog 45-A describing Light Metal Triest Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC., Milton, Pa.

820. **VARIABLE STRIPES AND PLAIDS** — Booklet describing Supreme Models SA and SA-ROF Stripers for knitting plaids, checks, "floatless" designs and variable stripes.—SUPREME KNITTING MACHINE CO., INC., Brooklyn 6, N. Y.

822. **HIGH SPEED JERSEY CIRCULAR MACHINE**—Completely illustrated brochure showing features and highlights of this 100 yard per hour producer. Also available — New Cylinder Chart — SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., New York.

827. **50% GREATER PRODUCTION** claimed for the same floor space on new RP4 Plain Jersey Machine; illustrated folder. — H. BRINTON CO., Philadelphia 24, Pa.

828. **THE KIDDE KNITTER**—Bulletin describing the newest in Raschel-type warp knitting machines and the higher production rates attained with it.—KIDDE MANUFACTURING CO., INC., Bloomfield, N. J.

SEWING MACHINES . . .

913. **"FELDLOCK & DUALFEED" MACHINE INSTRUCTION BOOK**—A 100-page book covering in detail, instructions on operation and maintenance, for owners, mechanics and operators.—WILCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

914. **CENTER PLAIT AND BUTTON-STAY MACHINE**—Folder No. 848. Illustrates and describes an improved machine Style 502-24, making a smooth box plait and perfect button-stay on shirts.—WILCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

915. **THE NEW UNION SPECIAL LOCKSTITCH MACHINE**—Information on the new model which cuts production time on sewing operations is contained in Bulletin No. 258.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

MATERIALS HANDLING . . .

1001. **HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY** — Profusely illustrated. Gives clear, concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits. — CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. **CATALOG NO. 22**—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use.—MERSEE, INC., Madison, Ind.

1003. **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1005. **BASKETS, HAMPERS, & TRUCKS**—This 24-page catalog is profusely illustrated and contains complete description on the Dandux line, especially designed for the textile industry.—C. R. DANIELS, INC., Daniels, Md.

1006. **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. **OVERHEAD HANDLING EQUIPMENT** — 56 pages of illustrattions showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., Cleveland, Ohio

1008. **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Colson Textile Casters.—WRENN BROTHERS, 230 South College St., Charlotte, N. C.

1020. **CONVEYORS**—16-page booklet, No. 65, and entitled "Modern Time and Cost Savers," covers detailed information and illustrations on gravity rollers, wheel conveyors, supports, portable piling machines, belt conveyors, etc.—STANDARD CONVEYOR COMPANY, North St. Paul, Minn.

1023. **CAB-OPERATED AND FLOOR-OPERATED ELECTRIC HOISTS**—Bulletin No. 127 describing and illustrating electric hoists of various types and capacities. — SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1026. **HEVI-LIFT ELECTRIC HOISTS**—Illustrated booklet describing the application of hoists ranging in capacity up to 15 tons in the textile industry. Gives suggested applications, detailed features and the 5-step variable speed full magnetic push-button control and seven types of mounting.—HARNISCHFEGER CORPORATION, Milwaukee 14, Wis.

1027. **SINGLE BEAM CRANES**—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling cranes.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1028. **TRAV-LIFT CRANES**—Bulletin H12-1 describing P & H overhead traveling crane service.—HARNISCHFEGER CORP., Milwaukee 14, Wis.

1030. **C-D HOLLOW WARE**—This 32-page catalog, 11W44, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specification is given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 38, Del.

MISCELLANEOUS . . .

1001. **AUTOMATIC BOBBIN REFINISHER**—A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2560 N. 30th St., Milwaukee, Wis.

1102. **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS** — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. **INTERPRETATION OF ANALYSIS.** — In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an attempt has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training. —NOPCO CHEMICAL CO., Harrison, N. J.

1105. **MILL NOTES**—This is a mimeographed six-page pamphlet published every month containing information of new developments in process manufacturing and testing of interest to woolen and cotton mills. Mailed free to interested readers on request.— UNITED STATES TESTING CO., Hoboken, N. J.

1107. **AUTOMATIC QUILL POLISHER.**—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2560 N. 30th Street, Milwaukee 10, Wis.

1108. **FABRICATION OF U. S. STAINLESS STEELS**—136 page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance table for chemicals.— CARNEGIE-ILLINOIS STEEL CORPORATION,— Pittsburgh, Penn.

1109. **PEERLESS FIRE PUMP** — Bulletin No. B-152 illustrates both horizontal and vertical pumps for every water handling service.—PEERLESS PUMP DIV., FOOD MACHINERY CORPORATION,—Los Angeles 31, Calif.

1111. **BRUSHES**—A 28-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.— GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. **"LIGHT DUTY-LOW AIR METALLIZING GUN**—Bulletin 55 describes and illustrates the economical operating features of this new metallizing gun. Operates on only 10 cu. ft. of air per minute—sprays all metals.—METALLIZING ENGINEERING COMPANY, INC., Long Island City, N. Y.

1113. **FLUORESCENT INSPECTION UNIT**—Data available which describes this new fixture, which employs fluorescent lamps behind a diffusing panel of flashed opal glass, with details of construction, advantages and complete specifications. — SALEM MANUFACTURING CO., Salem, Mass.

TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

Please send me, without obligation, free booklets or further information on New Equipment items described in the March 1949 issue of TEXTILE INDUSTRIES.

(Fill in here numbers you select from items in this issue).....

.....

.....

Name .....

Firm Name..... Position.....

City and State .....

Street .....

sent a reported investment of close to $1,000,000. Walter B. Gallant, Newmarket, N. H., is president.

Harry Frieze & Co., Inc., Boston, Mass., has been chartered with a capital of $50,000, to manufacture cotton and rayon fabrics. Harry Frieze is treasurer.

John H. Skinner Co., Inc., Lawrence, Mass., has been chartered with a capital of 1000 shares of stock, no par value, to operate a wool sorting and grading plant. John H. Skinner is president.

Clinton (Mich.) Woolen Mfg. Co., auto fabrics, uniform goods, etc., has work in progress on a three-story addition to the mill, forming a second unit. The cost is reported as over $150,000, with equipment.

Burlington Mills Corp. has purchased a tract of land adjacent to the Piedmont Heights Mill, Burlington, N. C., and the erection of a building to streamline certain production operations is proposed. It will also be used for additional warehouse space.

Carthage (N. C.) Weaving Co. has resumed operations at the mill after a shutdown of about one year.

Monroe (N. C.) Textiles, Inc., has been chartered with a capital of $250,000, to take over and operate the mill of Bloom Mills, Inc., Gastonia, N. C., which specializes in the production of combed knitting yarns.

Bartram Mills, Inc., recently organized, has succeeded to Adelphia Worsted Mills, Inc., Philadelphia, Pa., and will continue operations for the manufacture of worsted gabardines for men's and women's wear. Robert Lichtman, secretary and treasurer of the former company, is president of the new organization.

Fred Whitaker Co., Philadelphia, Pa., carbonized and scoured woolens, has approved plans for a two-story addition to cost over $85,000.

M. Salzberg & Sons, Inc., Central Falls, R. I., rayon fabrics, has acquired a portion of the former mill and property of Esmond (R. I.) Mills. Improvements will be made and the present weaving mill removed to the new location, where increased production will be carried out. The company will continue operations at Central Falls also.

L. & M. Fabrics, Inc., Woonsocket, R. I., has been chartered with a capital of 600 shares of stock, no par value, to manufacture rayon fabrics. Louis M. Macktaz, Woonsocket, is the principal incorporator and representative.

American Raw Silk Corp., Mineral Wells, Tex., is planning an expansion program which will completely integrate them from the agricultural aspect of the raw silk to finished silk lingerie garments. A tract of land has been acquired in Billey, Tex., where 300,000 mulberry trees will be planted during 1949. Reeling and other preparatory operations will be continued in Mineral Wells but existing weaving equipment is being moved to San Antonio. Finishing of the silk cloth and cutting and sewing processes will be carried on in Mineral Wells.

Drafting Long, Fine-Fiber Cottons

(*Continued from page* 113)

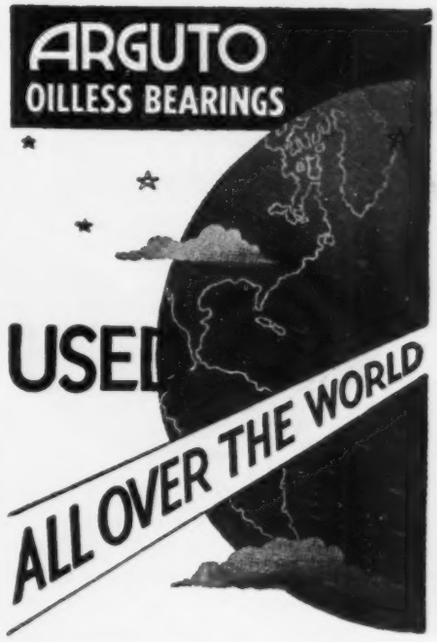
A study of the available draft table showed that erratic distribution of draft was the foremost cause of the unevenness. Three important elements are involved in allocating draft with the compound drafting section of the Super-Draft roving frame. It was found that each one exerts a critical influence on regularity of roving.

They are: (1) the ratio of the rear zone draft to the total draft of the compound drafting section; (2) the ratio of the rear zone draft to the weight of the stock fed; and (3) the length of the total draft of the compound drafting section.

Roving was substantially improved by establishing new draft allocations employing these three draft factors more advantageously. The new allocations were determined by studying test results on five counts of roving (from 2.00 to 6.00 hank) manufactured in different lots using Wilds 13 cotton and 150 separate combinations of draft. The most uniform roving was selected from each count by means of tests on a Belger roving tester.

Roving counts from 2.00 to 6.00 hank showed a decrease in variation of from 27.5 to 46.9 per cent. Yarns manufactured from 1 1/16-inch Stoneville 2b cotton showed substantial improvement in uniformity when graded by the Cotton Yarn Appearance Standards.

Number 16s tire cord yarn manufactured from this cotton with the new drafts showed a decrease in skein strength variation of 41.5 per cent and 51 per cent less variation in yarn number. Draft combinations used to produce this selected roving supplied the foundation for the draft allocations for the new guide. By this means, the influence of three elements of draft has been effectively employed to secure improved uniformity of roving.



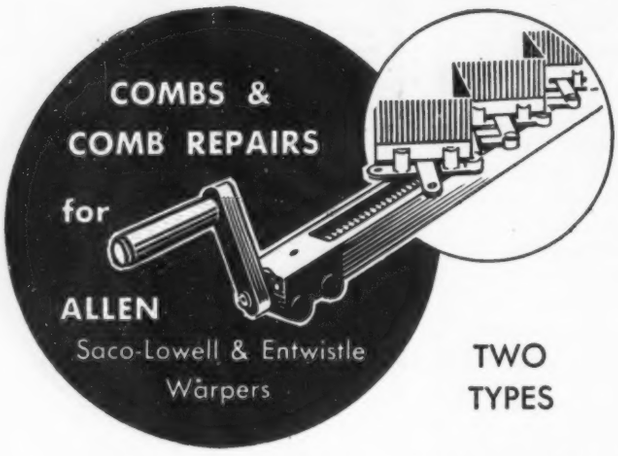
..IN MANY DIFFERENT

APPLICATIONS

"OUTWEARS THE BEST BRONZE METAL"

20 years without a drink—

ARGUTO OILLESS BEARING CO.
WEST JUNCTION PHILADELPHIA



TWO TYPES

The Allen Positive Expansion Comb is expanded by screws at each end and is superior to the tape expansion type. Can be expanded 100%. We supply Slasher Combs for all types of slashers. We also supply Leese Combs.

The Allen Spring Expansion Comb has open box construction, eliminates the collection of lint and dirt, facilitates cleaning. Can be expanded 30% and still maintain uniform spacing.

FOR REPAIRS — Send comb by express and we will immediately repair and return.

ALLEN COMPANY

General offices — 156 River Road
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For the past 66 years we have offered every modern facility for protected storage. Our carefully trained office and warehouse personnel provide flexible and efficient distribution of your merchandise. Kindly address communications to Dept. "T".
The Manhattan
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Ring Travelers
RINGS
Travelers have to fit rings, not just go on them. Our job is to fit those rings, but travelers you have used with good results on one type ring may not be correct for another ring almost the same.
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STERLING RING TRAVELER CO.
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NEW Way to Control Slime in Humidifiers

THAT important maintenance job is a cinch when you add OAKITE SANITIZER No. 1 to water in the system.

This new quaternary-ammonium germicide inhibits slime, algae and mold. Try it if your humidifiers are troubled by persistent "slime odors"; clogged spray nozzles; slime-choked overflow and drain lines. Recommended solutions are non-corrosive, relatively non-toxic, non-staining.

Your neighborhood Oakite Technical Service Representative will gladly give you details about this and other Oakite methods to simplify cleaning chores. Call him or write to Oakite Products, Inc., 26C Thames St., New York 6, N. Y.

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INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

Technical Service Representatives Located in Principal Cities of United States and Canada

SUPPLIERS' NEWS

WHAT THEY ARE DOING

The Phoenix Chemical Co., Augusta, Ga., has been newly established by the Phoenix Oil Company to manufacture detergents, adhesives, resins, dyestuffs, and dispersing agents. The plant will be headed by W. L. McCrary, Jr., president; O. O. McGahee, vice-president; Laurie E. Whittelsey, general manager, and W. Paul Bolen, director of research. A recently constructed building will house the new company. Mr. McCrary and Mr. McGahee have long been associated with the parent company; Mr. Whittelsey and Mr. Bolen were formerly connected with the Augusta Chemical Co.

W. A. Kennedy, president of **WAK Industries,** Charlotte, N. C., counter manufacturers, has been elected president of the Charlotte Engineers Club.

Frederick C. Holler has joined the staff of the **Institute of Textile Technology,** Charlottesville, Va., as a member of the physical chemistry department.

Home offices of the **Pittsburgh Corning Corp.** have been transferred from the Pittsburgh Plate Glass Building to larger quarters at 307 Fourth Avenue, Pittsburgh.

Ginsberg Machine Co., Inc., New York, N. Y., has been appointed to handle product sales of the Textile Trimming and Boarding Machine Co., Reading, Pa., and will include distribution of the new Trim-Master thread trimming machine.

O. O. Lewis has been promoted from assistant sales manager to sales manager of **Fairbanks, Morse & Co.,** Chicago, Ill.

Gordon R. Moffatt, former assistant superintendent, has succeeded the late Kenneth F. Jackson as superintendent of the East Spartanburg, S. C., plant of the **Draper Corporation.**

Monsanto Chemical Company, St. Louis, Mo., has designated all of its polystyrene products by the label Lustrex.

T. L. B. Lyster has retired as chief engineer of the **Hooker Electrochemical Co.,** Niagara Falls, N. Y. Mr. Lyster has been associated with Hooker in various capacities since 1907. To replace him is E. K. Newton, engineer.

The textile chemicals division of **L. Sonneborn Sons, Inc.,** New York N. Y., has named Joseph G. Donharl, formerly associated with American Cyanamid Co., as sales representative in Georgia, Tennessee, Alabama and Mississippi.

The new industrial oil processing unit of **Swift & Company's** technical products plant at Hammond, Ind., has been opened and operations begun. The processes carried out at the plant are solvent crystallization, solvent fractionation, and fat splitting.

Oakite Products, Inc., New York, N. Y., is celebrating its fortieth anniversary as suppliers of specialized cleaning and allied materials.

Benjamin R. Ebersman has tendered his resignation as general manager of **Supreme Knitting Machine Company,** Brooklyn, N. Y., ending 16 years of service. Sidney Mishcon has been appointed secretary and general manager. Irving M. Golden, former president of Golden Mfg. Co., Chicago, Ill., has joined Supreme as general sales representative.

Mr. Mischon

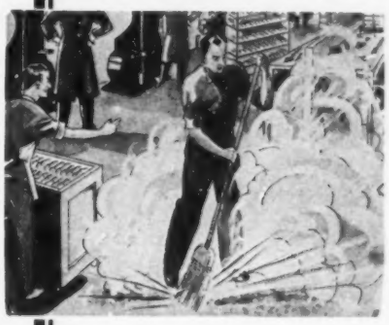
Mr. Golden

The **Power Transmission Co.** has been organized in High Point, N. C., to serve the mechanical power transmission needs of the textile industry in the South.

Harry B. Schwartz has rejoined the **New York (N. Y.) Quartermaster Purchasing Office,** and will again handle the procurement of knitgoods, including hosiery, underwear and outerwear.

A "Leadership" course has been prepared for supervisory employees in industry by **International Corre-**

STOP DUSTING of Concrete FLOORS



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STONHARD STONTOP

Eliminate "dusting" or surface disintegration of concrete floors produced by abrasive and rough wear. Simply flush and brush STONHARD STONTOP over your floors. It makes the surface extremely dense and wear-resistant. STONHARD STONTOP protects and prolongs the life of floors.

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Building Maintenance Materials Since 1922

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KALPINOL
for NYLON HOSIERY

Yarns wet with Kalpinol give a good stitch, then dry within two inches of the needles. Stitch remains set. Birdseyes or slipping of the stitch are avoided. Rolling is prevented, making seaming easier.

. . . a Kali lubricant that reduces friction on the needles and sinkers and also makes carrier tubes last longer.

For cleaning nylon size from your needles, sinkers, bits, etc., use K.N.K. (Kali Needle Kleaner). It can be used straight, or mixed with equal parts of water without separating.

ONE OF A FULL LINE OF KALI TEXTILE CHEMICALS.

KALI MANUFACTURING CO.
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NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA
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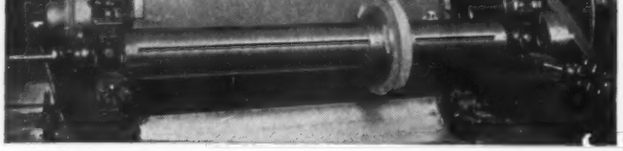
John:
Why not let the Penick & Ford Textile Laboratory in Atlanta check specifications on that cloth?
Jim

ROY
Heavy Duty
Bare Cylinder Grinder



For truing up Card Cylinders before clothing or redrawing.

Grinding your bare cylinders or doffer with this machine eliminates excessive grinding of newly applied wire.

B. S. ROY & SON COMPANY
Factory • Worcester, Mass.

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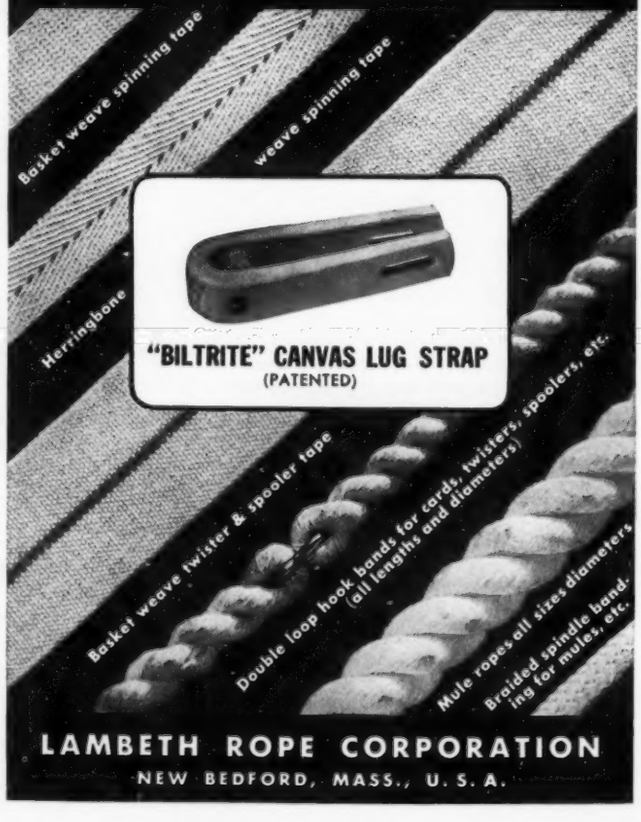
Charles E. Hendrick — L. P. Bell — B. L. Quick — who may be contacted at office and warehouse, 1623 North Tryon Street, Route 29, Charlotte, N. C. — Tel. 5-3845.

LAMBETH PRODUCTS
FOR SPINNING, TWISTING, SPOOLING, WEAVING


Basket weave spinning tape
weave spinning tape
Herringbone
"BILTRITE" CANVAS LUG STRAP
(PATENTED)
Basket weave twister & spooler tape
Double loop hook bands for cards, twisters, spoolers, etc. (all lengths and diameters)
Mule ropes all sizes diameters
Braided spindle banding for mules, etc.

LAMBETH ROPE CORPORATION
NEW BEDFORD, MASS., U. S. A.

spondence Schools, Scranton, Pa. Material for the lessons was gathered by Selby S. Santmyers, industrial training consultant of Lockport, N. Y. Titles of the five lesson units are: "Leadership and Free Enterprise," "Leadership and Output," "Leadership and the Workers," "Leadership and Organized Labor," and "Leadership and the Organization." These are included as a regular part of all I.C.S. management courses.

Duncan G. Carmichael, former technical director at Aralac Technical Laboratories, has been appointed technical representative for Eastman acetate dyestuffs, Kingsport, Tenn.

Mr. Carmichael

The new position is designated as a liaison between **Tennessee Eastman Corp.'s** dye customers and its sales and production staffs.

James Dixon has been appointed manager of the dyestuff department of **American Cyanamid Company's** Calco Chemical Division in Philadelphia, Pa.

Brooks M. Dyer, former assistant district sales manager of the Columbia Chemical Division of **Pittsburgh Plate Glass Co.** in Philadelphia, has succeeded Vernon L. Clark as St. Louis district sales manager. Mr. Clark has been assigned to special sales duties. Joseph A. Neubauer who has served as technical advisor since 1945 has been appointed technical director for the Columbia Chemical Division and for Southern Alkali Corp.

Dr. Donald H. Powers has been transferred from **Monsanto Chemical Company's** Merrimac Division textile department in Boston, Mass., to the general development department in St. Louis, Mo.

Claude V. Harp, Jr., has been moved from the Cleveland, Ohio, offices of **Reliance Electric & Engineering Co.** to the Houston, Tex., office as field sales engineer.

An investment of about $3,000,000 to expand facilities for the production of polyvinyl alcohols at the Niagara Falls, N. Y., plant has been authorized by **E. I. du Pont de Nemours, & Co.,** Wilmington, Del.

George H. Kent, former director of sales planning and general economics for the Koppers Co., Inc., Pittsburgh, Pa., has been appointed director of sales for **E. F. Drew & Co., Inc.,** New York, N. Y.

William F. Cox, former sales representative in New York for the Raritan Mills, has joined the **William Whitman Co., Inc.,** New York, N. Y., to handle sales of fabrics to the women's wear trade.

The **Du Pont Company** of Wilmington, Del., has announced the retirement of Dr. Elvin H. Killheffer of its development department. He has been with this department since 1935. Howard J. White, assistant manager of the rayon department, has also resigned after almost 34 years with Du Pont. Three personnel changes have been announced in the company's nylon division. A. J. Smith, Jr., former district sales manager at New York, has been transferred to the new nylon yarn plant at Chattanooga, Tenn. Charles E. du Pont, former assistant district sales manager, has been promoted to sales manager at New York, succeeding Mr. Smith. Alexander D. Irving, II, a salesman in the New York office, replaces Mr. du Pont as assistant district sales manager.

W. Douglas Smith has been made southern representative for the Diastafor department, Special Products Division of **Standard Brands, Inc.,** and will handle the company's line of Diastafor desizing agents.

Mr. Smith

A branch office at Appleton, Wis., has been opened by the **Foxboro (Mass.) Co.** Managing will be Milton A. Schreiner, an instrument engineer associated with the company since

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields.

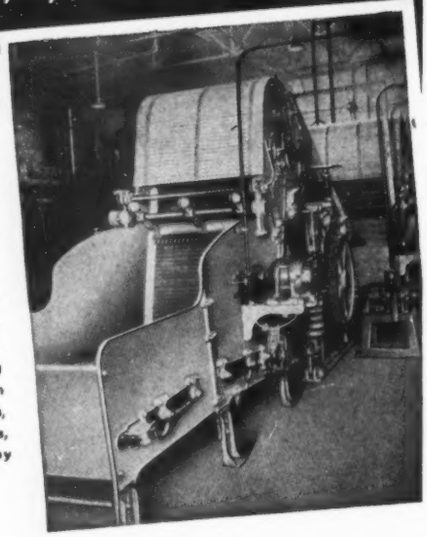
TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

SARGENT'S
CONTINUOUS – AUTOMATIC EXTRACTING MACHINE

Reduces drying costs to a minimum



TODAY'S MODERN EFFICIENT METHOD

The SARGENT CONTINUOUS EXTRACTING SYSTEM is saving thousands of dollars for many woolen, worsted and cotton mills. It employs an Automatic Feeder, the Extracting or Squeeze Roll Machine, and a Stock Dryer. This method of removing surplus dye, bleach, or scouring liquor from wool, staple rayon fibres, shoddy, mixed fibres, cotton and cotton linters, before drying, offers many distinct advantages.

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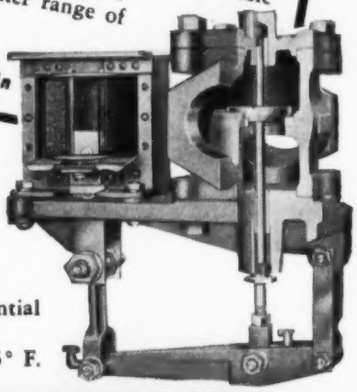
NEW—Direct Acting Solenoid Valve for 150 lbs. Differential Pressure . . .

That's the biggest news about the new Johnson Solenoid Valve. Some sizes will operate under differential pressures up to 150 lbs., *without pilot valves.* All sizes end the time lag and wiredrawing that come with slow opening—the danger of clogging that comes with auxiliary pistons. Whatever your liquid level or flow control problems, investigate the new possibilities this Johnson design brings to solenoid valves. It offers all the basic advantages, with none of the shortcomings, for a far greater range of applications.

GET ALL THE FACTS
Write for new bulletin



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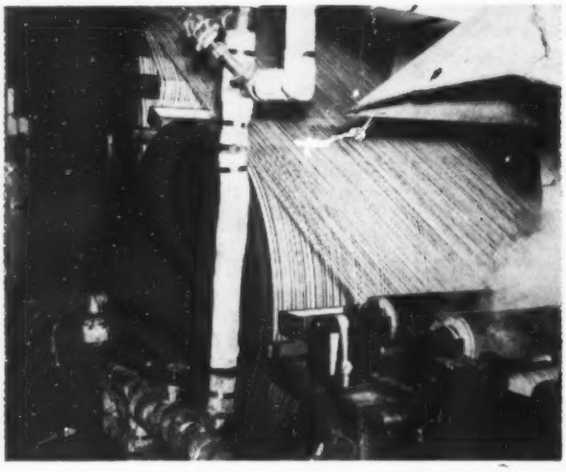

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INCREASE PRODUCTION AND IMPROVE QUALITY.

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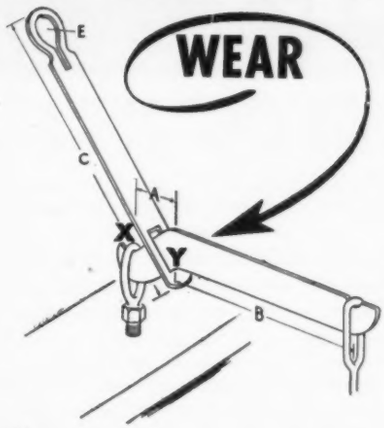

WHAT you don't know CAN hurt you! It can be extremely painful. Excessive wear of stirrups and levers in your drafting assemblies, especially when *not* noticed, prevents GOOD SPINNING.

For example, excessive wear at points "X" and "Y" above, often unseen, will destroy proper weighting ratios. Careful inspection of *stirrups, levers* and *lever screws* should be made regularly, and worn parts replaced immediately.

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1. More than 350 different stirrups, each with varying lengths—"C"—and special head openings—"E"—to properly fit over and lock on saddles.
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"It costs so little and saves so much"

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LUBRICATING SADDLE CO
Established 1876
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Southern Sales Representatives:
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P.O. Box 1474 Greensboro, N. C.

J. W. DAVIS, Mfg'rs Agent
P.O. Box 745 Columbus, Ga.

1922 in the midwest. Another new Foxboro office is in Kansas City, Mo.; George J. Willier is manager. John D. Deaderick is manager of the office recently opened in Baton Rouge, La.

Ralph M. Briggs, Jr., has been appointed by the **Bullard Clark Company,** Danielson, Conn., as southern

Mr. Briggs

New England service engineer for its E. H. Jacobs and Williamsville Buff divisions.

Kidde Manufacturing Co., Inc., Bloomfield, N. J., has acquired the manufacturing and sales rights for the Aveco high-speed tricot machine, which was developed by Aveco, Inc., a subsidiary of the American Viscose Corp.

Seydel-Woolley & Co., Atlanta, Ga., warp sizing manufacturers, has announced the formation of a finishing division for the manufacture of chemicals and to render service to the wet

Mr. Meriwether

processing branch of the industry. Plant expansion has been made. David Meriwether, former vice-president and general manager of the Rockland Bleach and Dye Works, Brooklandville, Md., has been appointed as general sales representative for the finishing division.

Earl B. Wheeler has been appointed sales representative in North and South Carolina, and Georgia for **Standard Fabricators, Inc.**

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DOES BOTH JOBS

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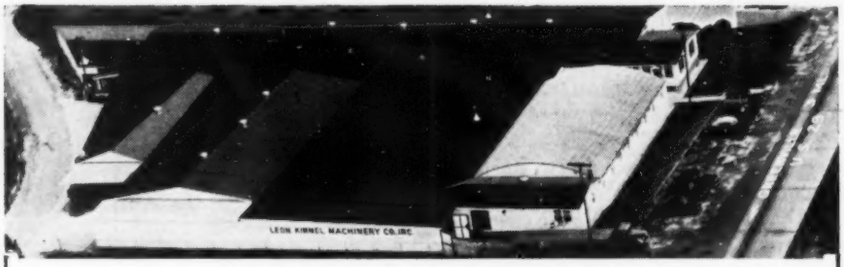

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4—Haskell-Dawes 12-spindle Twisters.
1—Proctor & Schwartz 4-truck Dryer.
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FOR SALE

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POSITION WANTED

Wanted: Position as superintendent or manager. Experience on combed card cotton yarn and spun rayon. The last thirteen years as superintendent, eight years over yarn mills and last four over weave. Forty-five years of age. Protestant religion. Sober. High school graduate. I. C. S. textile graduate. As many as two thousand employees under my supervision at one time. Have run both union and non-union mills. Satisfactory references. Can run your mill. Box 281, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Georgia.

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Company, marketing a process and service of real importance to textile printers, offers good opportunity to representative who has following in New England. Pennsylvania and territories south. Attractive commissions. Please write details. Box 279, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

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Inexperience is now inexcusable and probably fatal, if used in directing operatives.
An experienced and successful executive with college, technical and practical experience in operating and directing textile operations together with handling present-day labor difficulties, will consider position as General Manager or Vice-President in charge of operations in large or medium-sized cotton mill organization. Address Box 283, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

WANTED POSITION
as Superintendent of cotton mill by man with broad practical and technical training. Immediate salary less important than opportunity. Box 284, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

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will produce results at small cost. Do you desire a position? Do you desire a good man to fill a vacancy in your mill? Do you desire your business or professional card placed before the textile industries?
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Note the rates and send in your advertisement today.
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POSITION WANTED
As overseer of weaving, or superintendent of textile plant, cotton, rayon, or both. Age 39, 2 years textile college work, also I.C.S. graduate. 15 years successful work in textiles, as loom fixer, overseer, teacher, all model Draper Looms, cam and Dobby. Designing, weave formation. Thorough knowledge of entire plant. Successful in present position, but will change if connections warrant. Box 285, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

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Long established and well known company manufacturing machinery for hosiery knitting and yarn manufacturing industries has openings for a couple of capable salesmen with contacts. Write, giving experience, territory covered and lines now handled. Write Box 288, c/o TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta, Ga.

POSITION WANTED
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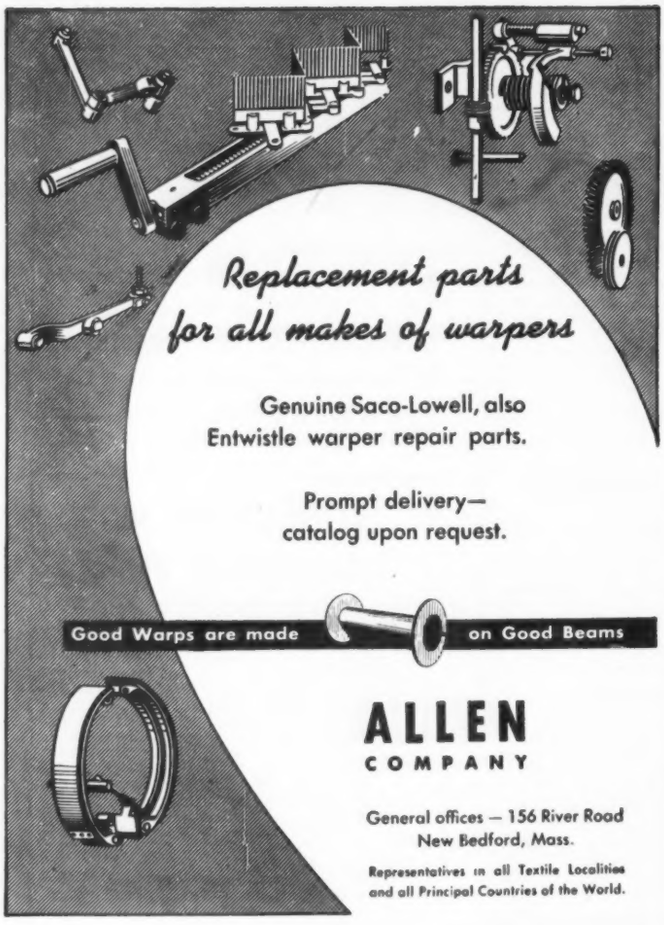

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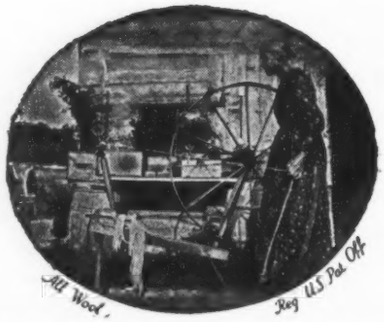

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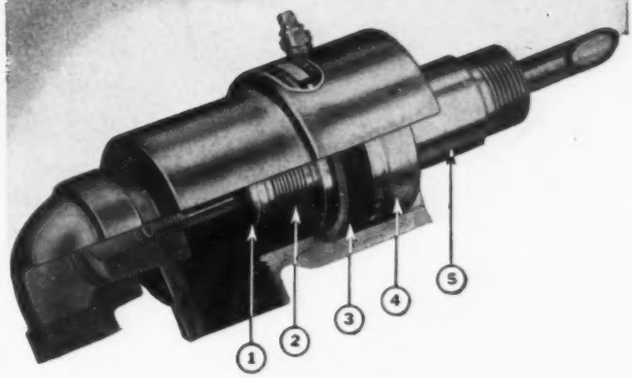

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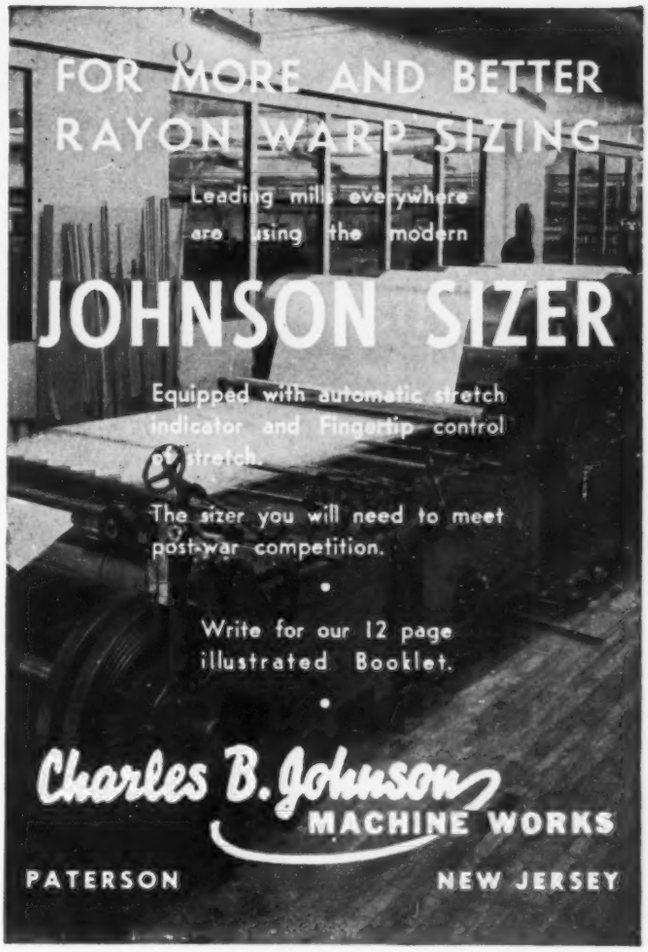
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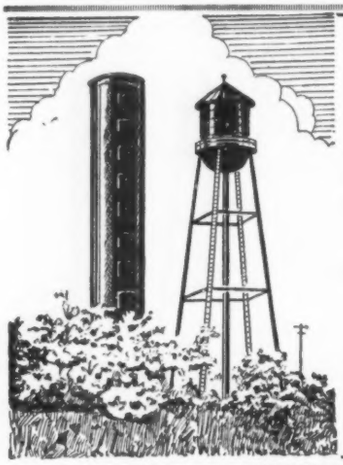

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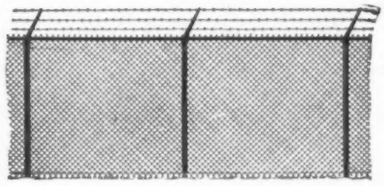

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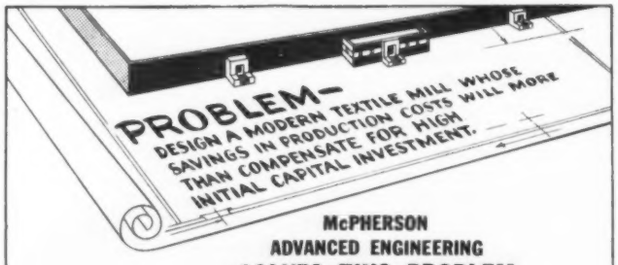
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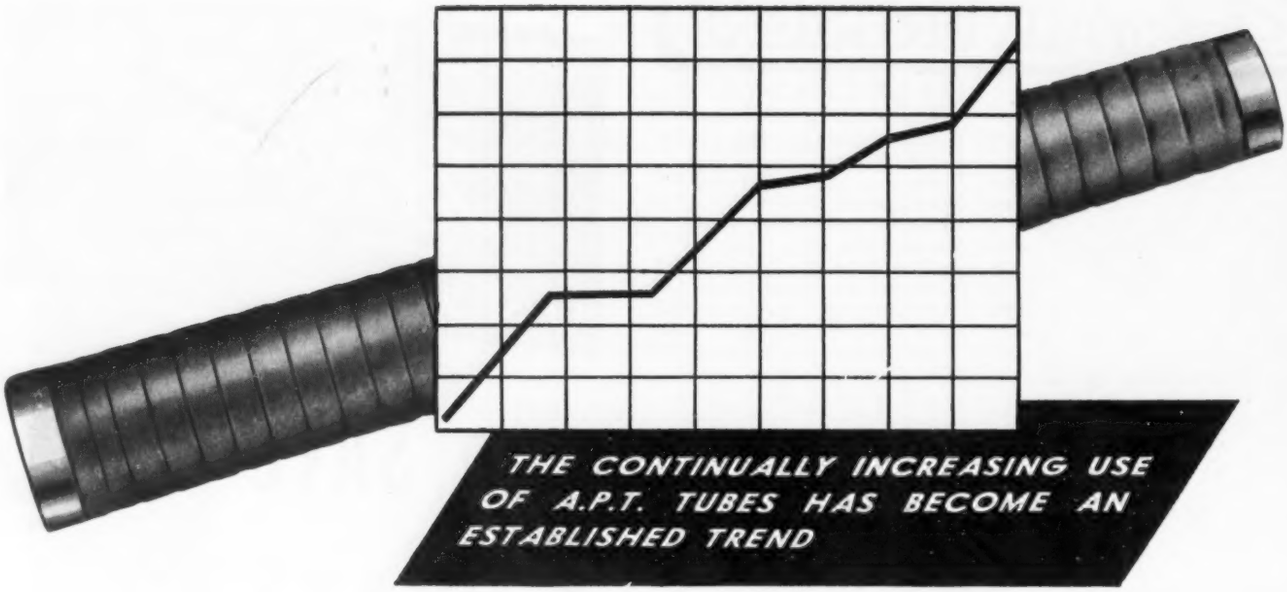

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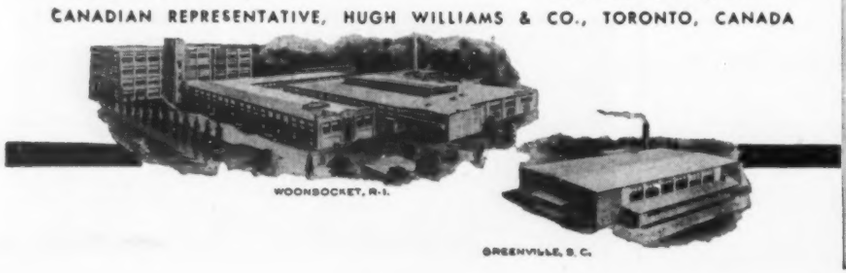
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